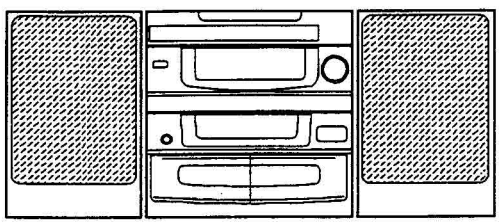
aiwa

aiwa SERVICE

Z-2300

SERVICE MANUAL



STEREO SYSTEM

- BASIC TAPE MECHANISM: 2ZM-3 PR6N
- BASIC CD MECHANISM: 4ZG-1SDFR
- TYPE. HR,G,K,EE,EEZ,EZ

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1S. (S/M Code No. 09-955-104-70T)

SYSTEM	CENTER UNIT	REMOTE CONTROLLER	SPEAKER	TURNTABLE (OPTIONAL)
Z-2300	CX-Z2300	RC-T506	SX-Z2300	※ PX-E850

※ As to the service information of PX-E850 see the individual Service Manual of PX-E850 ‹EE,K,U,H,HE› (S/M Code No. 09-947-070-90I) and PX-E850 ‹G› (S/M Code No. 09-94C-086-80I).

S/M Code No. 09-957-108-10T

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SPECIFICATIONS

Main unit CX-Z2300

HR, G MODELS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

EE, K, EZ, EEZ MODELS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<MW tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW tuner section>

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1000 µV/m
Antenna	Loop antenna

HR, G MODELS

<Amplifier section>

Power output	**Front** (without connecting to the SURROUND SPEAKERS) Rated: 50 W + 50 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference: 60 W + 60 W (6 ohms, T.H.D. 10 %, 1 kHz) **Rear (Surround)** Rated: 8 W + 8 W (16 ohms, T.H.D. 1 %, 1 kHz) Reference: 10 W + 10 W (16 ohms, T.H.D. 10 %, 1 kHz) **Center** Rated: 16 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference: 20 W (8 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.1 % (30 W, 1 kHz, 6 ohms)
Inputs	VIDEO/AUX: 300 mV (47 kohms with volume) PHONO: 250 mV (47 kohms) MIC 1, MIC 2: 2.2 mV (20 kohms)
Outputs	LINE OUT: 200 mV (47 kohms) SUPER WOOFER: 1.9 V SPEAKERS: accepts speakers of 6 ohms or more CENTER SPEAKER: accepts speakers of 8 ohms or more SURROUND SPEAKERS: accepts speakers of 16 ohms or more PHONES (ø6.3 mm stereo jack): accepts headphones of 32 ohms or more CD DIGITAL OUT (OPTICAL)

EE, K, EZ, EEZ MODELS

<Amplifier section>

Power output	**Front** (without connecting to the SURROUND SPEAKERS) Rated: 50 W + 50 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 65 W + 65 W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER: 95 W + 95 W **Rear (Surround)** Rated: 8 W + 8 W (16 ohms, T.H.D. 1 %, 1 kHz) Reference: 10 W + 10 W (16 ohms, T.H.D. 10 %, 1 kHz) DIN MUSIC POWER: 20 W + 20 W **Center** Rated: 16 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference: 20 W (8 ohms, T.H.D. 10 %, 1 kHz) DIN MUSC POWER: 40 W
Total harmonic distortion	0.1 % (25 W, 1 kHz, 6 ohms)
Inputs	VIDEO/AUX: 300 mV (47 kohms with volume) PHONO: 250 mV (47 kohms) MIC 1, MIC 2: 2.2 mV (20 kohms)
Outputs	LINE OUT: 200 mV (47 kohms) SUPER WOOFER: 1.7 V SPEAKERS: accepts speakers of 6 ohms or more CENTER SPEAKER: accepts speakers of 8 ohms or more SURROUND SPEAKERS: accepts speakers of 16 ohms or more PHONES (ø6.3 mm stereo jack): accepts headphones of 32 ohms or more CD DIGITAL OUT (OPTICAL)

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, CrO_2 tape peak level above 400 Hz)
Recording system	AC bias
Heads	DECK 1: Playback head × 1 DECK 2: Recording/playback/erase head × 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.03 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

SPEAKER SYSTEM SX-Z2300

Cabinet type	3 way, bass reflex (Magnetism sealed type)
Speaker	Woofer: 220 mm (8 3/4 in.) cone type Tweeter: 60 mm (2 3/8 in.) cone type Super tweeter: 30 mm (1 3/16 in.) ceramic type
Impedance	6 ohms
Output sound pressure level	90 dB/W/m
Dimensions (W × H × D)	260 × 434 × 275 mm (10 1/4 × 17 1/8 × 10 7/8 in.)
Weight	4.5 kg (9 lbs 15 oz.)

GENERAL

Power requirements	HR: 120/220-230/240 V AC, switchable, 50/60 Hz EE, K, EZ, EEZ: 230 V AC, 50 Hz G: 230-240 V AC, fixed, 50 Hz
Power consumption	HR, G: 135 W EE, K, EZ, EEZ: 350 W
Dimensions of main unit (W × H × D)	HR, G: 360 × 385 × 339.5 mm (14 1/4 × 15 1/4 × 13 3/8 in.) EE, K, EZ, EEZ: 360 × 385 × 340.5 mm (14 1/4 × 15 1/4 × 13 1/2 in.)
Weight of main unit	10.5 kg (23 lbs 2 oz.)

- Design and specifications are subject to change without notice.
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  Under license from BBE Sound, Inc.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC			
	87-020-454-010		IC,DN6851
	87-017-885-010		IC,NJM2177AF
	85-MA1-611-010		IC,LC866440W-5829
	82-NE6-617-019		IC,GP1U581X
	87-002-872-040		IC,MC14053BF
	87-017-374-019		IC,TC4094BP
	87-017-888-089		IC,NJM4558MD
	87-001-903-019		IC,STK4172-2
	87-070-232-019		IC,BA3834S
	87-070-121-010		IC,HA12185NT
	87-017-375-089		IC,TC4094BF
	87-070-205-019		IC,TC9299P
	87-070-184-040		IC,M65846FP-600D
	87-001-874-019		IC,HA12134A
	87-017-673-019		IC,BA3837
	87-070-163-019		IC,STK405-030
	87-017-022-089		IC,NJM2068M-D(TI)
	87-017-449-010		IC,XR-1071CP
	87-027-666-019		IC,TC4052BP
	87-017-804-019		IC,BU4052BC
	87-070-127-019		IC,LC72131
	87-017-714-019		IC,LA1836
	87-001-530-019		IC,LA3607
	87-001-528-019		IC,LC7522
	87-017-675-080		IC,M65840FP<HR>
TRANSISTOR			
	87-026-463-080		TR,2SA933S
	89-324-121-089		C-TR,2SC2412K
	89-213-702-019		TR,2SB1370E
	89-109-352-089		TR,2SA 935 Q
	87-026-226-089		C-TR,DTA143EK
	87-026-610-089		TR,KTC3198GR
	89-327-125-089		C-TR,2SC2712GR
	89-332-665-089		TR,2SC3266GR
	89-337-221-389		C-TR,2SC3722K(R/S/E)
	89-111-625-089		C-TR,2SA1162GR
	87-026-210-089		C-TR,DTC144EKT147
	87-026-211-089		C-TR,DTA144EKT147
	87-026-235-089		C-TR,DTC114EK
	89-109-521-089		TR,2SA952K
	89-333-266-089		C-TR,2SC3326B
	87-026-232-089		C-TR,DTA144WK
	87-026-658-010		FET,2SJ176
	89-510-940-010		FET,2SK1094
	89-322-405-089		TR,2SC2240GR
	87-026-213-089		C-TR,DTC114YK
	89-503-655-689		FET,2SK365GR,BL
	89-333-317-089		TR,2SC3331T
	89-327-126-089		C-TR,2SC2712BL<EE,EEZ,K,EZ>
	89-112-965-089		TR,2SA1296GR
	89-406-555-089		TR,2SD655E
	89-113-187-889		TR,2SA1318TU
	87-026-238-089		C-TR,DTC144WK
	89-316-236-089		TR,2SC1623L6
	87-026-214-089		TR,DTA114YS
	89-327-143-089		C-TR,2SC2714 (O)
	89-505-434-589		C-FET,2SK543(4/5)
DIODE			
	87-020-691-089		DIODE,1SS132 T-72
	87-002-597-069		DIODE,DBF,60C-K13
	87-001-914-089		ZENER,UTZJ 6.2B
	87-070-136-089		ZENER,MTZJ5.1B
	87-020-331-089		C-DIODE,DAN202K
	87-017-978-089		DIODE,1N4003
	87-020-027-089		C-DIODE,1SS184
	87-020-125-089		C-DIODE,1SS181
	87-020-465-089		DIODE,1SS133
	87-017-174-089		ZENER,HZS11A3L
	87-017-146-089		ZENER,HZS30-2
	87-002-225-019		DIODE,DBF 40C-K10
	87-001-636-089		ZENER,HZS3C1
	87-001-290-089		ZENER,HZS6B1L
	87-001-559-089		DIODE,1SS 131 (T-72)
	87-070-178-099		DIODE,1N5402-BD54
	87-001-408-080		DIODE,GP 15B<EE,EEZ,K,EZ>
	87-001-408-089		DIODE,GP 15B<HR,G>
	87-017-086-089		ZENER,HZS5A2
	87-020-584-089		C-ZENER,02CZ5.6Y
	87-020-339-089		C-DIODE,1SS226
	87-017-148-089		ZENER,HZS6A1L
MAIN C.B			
C101	87-016-658-099		CAP ELECT 4700-35V SME
C102	87-016-658-099		CAP ELECT 4700-35V SME
C104	87-010-235-089		CAP,E 470-16 SME
C105	87-010-381-089		CAP,E 330-16 SME
C106	87-010-430-089		CAP ELECT(TAPG) 100-63V
C107	87-010-405-089		CAP,E 10-50 SME
C108	87-010-406-089		CAP,E 22-50 SME
C109	87-010-263-089		CAP,E 100-10 SME
C112	87-010-382-089		CAP,E 22-25 SME
C113	87-010-403-089		CAP,E 3.3-50 SME
C115	87-016-247-089		C-CAP,0.1-50 F
C116	87-012-140-089		C-CAP,S 470P-50 CH
C117	87-012-368-089		C-CAP,S 0.1-50F
C118	87-012-368-089		C-CAP,S 0.1-50F
C119	87-012-368-089		C-CAP,S 0.1-50F
C120	87-012-368-089		C-CAP,S 0.1-50F<EE,EEZ,K,EZ>
C121	87-012-368-089		C-CAP,S 0.1-50F<EE,EEZ,K,EZ>
C126	87-016-055-099		CAP,E 3300-42 HI-R
C127	87-016-055-099		CAP,E 3300-42 HI-R
C128	87-012-368-089		C-CAP,S 0.1-50F
C129	87-012-368-089		C-CAP,S 0.1-50F
C130	87-012-368-089		C-CAP,S 0.1-50F
C131	87-012-368-089		C-CAP,S 0.1-50F
C152	87-010-260-089		CAP,E 47-25 SME
C201	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C202	87-018-211-089		TC CAP U 0.01-50<EE,EEZ,K,EZ>
C203	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C204	87-018-211-089		TC CAP U 0.01-50<EE,EEZ,K,EZ>
C213	87-010-401-089		CAP,E 1-50 SME
C214	87-010-401-089		CAP,E 1-50 SME
C215	87-010-184-089		C-CAP,S 3300P-50 B<HR,G>
C216	87-010-184-089		C-CAP,S 3300P-50 B<HR,G>
C217	87-010-404-089		CAP,E 4.7-50 SME
C218	87-010-404-089		CAP,E 4.7-50 SME
C219	87-010-188-089		C-CAP,S 6800P-50 B
C220	87-010-188-089		C-CAP,S 6800P-50 B
C221	87-010-400-089		CAP,E 0.47-50 SME
C222	87-010-400-089		CAP,E 0.47-50 SME
C223	87-010-260-089		CAP,E 47-25 SME
C224	87-010-260-089		CAP,E 47-25 SME<HR,G>
C225	87-010-260-089		CAP,E 47-25 SME
C226	87-010-260-089		CAP,E 47-25 SME
C227	87-018-209-089		CAP,TC-U 0.1-50 F
C228	87-018-209-089		CAP,TC-U 0.1-50 F
C231	87-010-196-089		C-CAP,S 0.1-25 F
C235	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C236	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C237	87-010-184-089		C-CAP,S 3300P-50 B<EE,EEZ,K,EZ>
C238	87-010-184-089		C-CAP,S 3300P-50 B<EE,EEZ,K,EZ>
C243	87-010-154-089		C-CAP,S 10P-50 CH

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C244	87-015-879-089		C-CAP,10P CH
C245	87-018-208-089		CAP,TC-U 0.047-50 F<HR,G>
C250	87-010-197-089		C-CAP,S 0.01-25 B
C251	87-010-766-089		CAP,E 330-63
C297	87-010-404-089		CAP,E 4.7-50 SME
C298	87-010-404-089		CAP,E 4.7-50 SME
C299	87-016-130-089		ELECT CAP 47-25 KME<EE,EEZ,K,EZ>
C303	87-012-157-089		C-CAP,S 330P-50 CH
C304	87-012-157-089		C-CAP,S 330P-50 CH
C305	87-012-155-089		C-CAP,S 180P-50 CH
C306	87-012-155-089		C-CAP,S 180P-50 CH
C307	87-010-805-089		C-CAP,S 1-16F
C308	87-010-805-089		C-CAP,S 1-16F
C313	87-010-181-089		C-CAP,S 1800P-50 B
C314	87-010-181-089		C-CAP,S 1800P-50 B
C315	87-010-179-089		C-CAP,S 1200P-50 B
C316	87-010-179-089		C-CAP,S 1200P-50 B
C317	87-012-142-089		C-CAP,S 0.33-16 F
C318	87-010-955-089		C-CAP,0.33-16 R
C319	87-012-141-089		C-CAP,S 0.22-16 F
C320	87-012-141-089		C-CAP,S 0.22-16 F
C321	87-010-196-089		C-CAP,S 0.1-25 F
C322	87-010-196-089		C-CAP,S 0.1-25 F
C324	87-010-260-089		CAP,E 47-25 SME
C325	87-010-370-089		CAP,E 330-6.3 SME
C326	87-010-196-089		C-CAP,S 0.1-25 F
C332	87-010-196-089		C-CAP,S 0.1-25 F
C335	87-010-805-089		C-CAP,S 1-16F
C336	87-010-805-089		C-CAP,S 1-16F
C337	87-010-805-089		C-CAP,S 1-16F
C351	87-012-154-089		C-CAP,S 150P-50 CH
C352	87-012-154-089		C-CAP,S 150P-50 CH
C451	87-012-140-089		C-CAP,S 470P-50 CH
C452	87-012-140-089		C-CAP,S 470P-50 CH
C453	87-010-178-089		C-CAP,S 1000P-50 B
C454	87-010-178-089		C-CAP,S 1000P-50 B<EE,EEZ,K,EZ>
C455	87-010-178-089		C-CAP,S 1000P-50 B<EE,EEZ,K,EZ>
C456	87-010-260-089		CAP,E 47-25 SME
C457	87-010-197-089		C-CAP,S 0.01-25 B
C458	87-010-183-089		C-CAP,S 2700P-50 B
C459	87-010-183-089		C-CAP,S 2700P-50 B
C460	87-010-183-089		C-CAP,S 2700P-50 B
C470	87-010-196-089		C-CAP,S 0.1-25 F
C501	87-010-177-089		C-CAP,S 820P-50 SL
C502	87-010-177-089		C-CAP,S 820P-50 SL
C503	87-012-155-089		C-CAP,S 180P-50 CH
C504	87-012-155-089		C-CAP,S 180P-50 CH
C515	87-010-545-089		CAP,E 0.22-50 SME
C516	87-010-545-089		CAP,E 0.22-50 SME
C519	87-010-196-089		C-CAP,S 0.1-25 F
C521	87-010-197-089		C-CAP,S 0.01-25 B
C522	87-010-318-089		C-CAP,S 47P-50 CH
C523	87-010-197-089		C-CAP,S 0.01-25 B
C524	87-010-402-089		CAP,E 2.2-50 SME
C530	87-010-194-089		C-CAP,S 0.047-25 F
C531	87-010-545-089		CAP,E 0.22-50 SME
C532	87-010-382-089		CAP,E 22-25 SME
C533	87-010-404-089		CAP,E 4.7-50 SME
C534	87-010-404-089		CAP,E 4.7-50 SME
C535	87-010-404-089		CAP,E 4.7-50 SME
C536	87-010-404-089		CAP,E 4.7-50 SME
C537	87-018-209-089		CAP,TC-U 0.1-50 F
C538	87-010-384-089		CAP,E 100-25 SME
C539	87-012-142-089		C-CAP,S 0.33-16 F<HR>
C540	87-010-196-089		C-CAP,S 0.1-25 F
C541	87-010-196-089		C-CAP,S 0.1-25 F
C543	87-010-544-089		CAP,E 0.1-50<EE,EEZ,K,EZ>
C543	87-010-546-089		CAP,E 0.33-50 SME<HR,G>
C544	87-010-544-089		CAP,E 0.1-50<EE,EEZ,K,EZ>
C544	87-010-546-089		CAP,E 0.33-50 SME<HR,G>
C547	87-010-213-089		C-CAP,S 0.015-50 B
C548	87-010-213-089		C-CAP,S 0.015-50 B
C549	87-018-209-089		CAP,TC-U 0.1-50 F
C550	87-010-183-089		C-CAP,S 2700P-50 B
C551	87-010-176-089		C-CAP,S 680P-50 SL
C552	87-010-176-089		C-CAP,S 680P-50 SL
C553	87-010-178-089		C-CAP,S 1000P-50 B<HR,G>
C553	87-010-182-089		C-CAP,S 2200P-50 B<EE,EEZ,K,EZ>
C554	87-010-178-089		C-CAP,S 1000P-50 B<HR,G>
C554	87-010-182-089		C-CAP,S 2200P-50 B<EE,EEZ,K,EZ>
C555	87-012-358-089		C-CAP S 0.47-10FZ
C556	87-012-358-089		C-CAP S 0.47-10FZ
C597	87-010-404-089		CAP,E 4.7-50 SME
C598	87-010-404-089		CAP,E 4.7-50 SME
C601	87-010-401-089		CAP,E 1-50 SME
C602	87-010-405-089		CAP,E 10-50 SME
C603	87-010-101-089		CAP,E 220-16 SME
C605	87-010-178-089		C-CAP,S 1000P-50 B
C606	87-010-178-089		C-CAP,S 1000P-50 B
C607	87-010-404-089		CAP,E 4.7-50 SME
C608	87-010-404-089		CAP,E 4.7-50 SME
C609	87-010-404-089		CAP,E 4.7-50 SME
C610	87-010-404-089		CAP,E 4.7-50 SME
C611	87-010-181-089		C-CAP,S 1800P-50 B
C612	87-010-181-089		C-CAP,S 1800P-50 B
C613	87-010-404-089		CAP,E 4.7-50 SME
C614	87-010-404-089		CAP,E 4.7-50 SME
C615	87-010-400-089		CAP,E 0.47-50 SME
C616	87-010-400-089		CAP,E 0.47-50 SME
C617	87-010-197-089		C-CAP,S 0.01-25 B
C618	87-010-197-089		C-CAP,S 0.01-25 B
C619	87-010-184-089		C-CAP,S 3300P-50 B
C620	87-010-184-089		C-CAP,S 3300P-50 B
C621	87-012-155-089		C-CAP,S 180P-50 CH
C622	87-012-155-089		C-CAP,S 180P-50 CH
C623	87-010-405-089		CAP,E 10-50 SME
C624	87-010-405-089		CAP,E 10-50 SME
C627	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C628	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C630	87-010-405-089		CAP,E 10-50 SME
C631	87-010-401-089		CAP,E 1-50 SME
C641	87-010-196-089		C-CAP,S 0.1-25 F
C642	87-010-196-089		C-CAP,S 0.1-25 F
C701	87-010-381-089		CAP,E 330-16 SME
C702	87-010-404-089		CAP,E 4.7-50 SME
C703	87-010-197-089		C-CAP,S 0.01-25 B
C704	87-010-197-089		C-CAP,S 0.01-25 B
C711	87-010-263-089		CAP,E 100-10 SME
C712	87-010-196-089		C-CAP,S 0.1-25 F
C722	87-010-311-089		C-CAP,S 12P-50 CH
C723	87-010-178-089		C-CAP,S 1000P-50 B
C725	87-010-178-089		C-CAP,S 1000P-50 B
C727	87-010-196-089		C-CAP,S 0.1-25 F
C728	87-010-248-089		CAP,E 220-10 SME
C732	87-018-134-089		CAP,TC-U 0.01-16 Y<EE,EEZ,K,EZ>
C770	87-010-405-089		CAP,E 10-50 SME
C771	87-010-405-089		CAP,E 10-50 SME
C772	87-010-194-089		C-CAP,S 0.047-25 F
C773	87-010-196-089		C-CAP,S 0.1-25 F
C774	87-010-263-089		CAP,E 100-10 SME
C775	87-010-405-089		CAP,E 10-50 SME
C776	87-010-197-089		C-CAP,S 0.01-25 B
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-089		CAP,E 1-50 SME
C779	87-010-401-089		CAP,E 1-50 SME
C780	87-010-197-089		C-CAP,S 0.01-25 B
C781	87-010-405-089		CAP,E 10-50 SME
C782	87-010-405-089		CAP,E 10-50 SME
C787	87-010-184-089		C-CAP,S 3300P-50 B
C788	87-010-184-089		C-CAP,S 3300P-50 B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C789	87-010-179-089		C-CAP,S 1200P-50 B
C790	87-010-179-089		C-CAP,S 1200P-50 B
C791	87-010-401-089		CAP,E 1-50 SME
C792	87-010-180-089		C-CAP,S 1500P-50 B
C793	87-010-189-089		C-CAP,S 8200P-50 B
C794	87-010-408-089		CAP,E 47-50 SME
C795	87-010-194-089		C-CAP,S 0.047-25 F
C796	87-010-403-089		CAP,E 3.3-50 SME
C797	87-010-405-089		CAP,E 10-50 SME
C798	87-010-196-089		C-CAP,S 0.1-25 F
C814	87-010-197-089		C-CAP,S 0.01-25 B<HR,G>
C816	87-018-134-089		CAP,TC-U 0.01-16 Y<EE,EEZ,K,EZ>
C817	87-010-197-089		C-CAP,S 0.01-25 B
C818	87-010-197-089		C-CAP,S 0.01-25 B
C819	87-010-197-089		C-CAP,S 0.01-25 B
C820	87-010-260-089		CAP,E 47-25 SME
C821	87-010-197-089		C-CAP,S 0.01-25 B
C822	87-010-197-089		C-CAP,S 0.01-25 B
C823	87-010-197-089		C-CAP,S 0.01-25 B
C824	87-018-134-089		CAP,TC-U 0.01-16 Y<HR,G>
C824	87-018-209-089		CAP,TC-U 0.1-50 F<EE,EEZ,K,EZ>
C825	87-015-819-089		CHIP CAP 0.01
C826	87-010-196-089		C-CAP,S 0.1-25 F
C827	87-010-196-089		C-CAP,S 0.1-25 F
C828	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C829	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C830	87-015-819-089		CHIP CAP 0.01
C831	87-010-197-089		C-CAP,S 0.01-25 B
C835	87-010-197-089		C-CAP,S 0.01-25 B
C840	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C901	87-010-401-089		CAP,E 1-50 SME<HR>
C902	87-010-178-089		C-CAP,S 1000P-50 B<HR>
C903	87-010-178-089		C-CAP,S 1000P-50 B<HR>
C904	87-010-184-089		C-CAP,S 3300P-50 B<HR>
C905	87-010-177-089		C-CAP,S 820P-50 SL<HR>
C906	87-010-178-089		C-CAP,S 1000P-50 B<HR>
C907	87-010-185-089		C-CAP,S 3900P-50 B<HR>
C909	87-010-175-089		C-CAP,S 560P-50 SL<HR>
C910	87-010-176-089		C-CAP,S 680P-50 SL<HR>
C911	87-010-196-089		C-CAP,S 0.1-25 F<HR>
C918	87-010-186-089		C-CAP,S 4700P-50 B<HR>
C920	87-010-374-089		CAP,E 47-10<HR>
C921	87-010-263-089		CAP,E 100-10 SME<HR>
C922	87-010-196-089		C-CAP,S 0.1-25 F<HR>
C923	87-010-154-089		C-CAP,S 10P-50 CH<HR>
C924	87-010-154-089		C-CAP,S 10P-50 CH<HR>
C925	87-018-209-089		CAP,TC-U 0.1-50 F<HR>
C926	87-010-196-089		C-CAP,S 0.1-25 F<EXCEPT HR>
C927	87-010-197-089		C-CAP,S 0.01-25 B<HR>
C941	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C942	87-010-311-089		C-CAP,S 12P-50 CH<EE,EEZ,K,EZ>
C944	87-010-154-089		C-CAP,S 10P-50 CH<EE,EEZ,K,EZ>
C945	87-012-154-089		C-CAP,S 150P-50 CH<HR>
C945	87-014-050-089		CAP,PP 510P-100 J<EE,EEZ,K,EZ>
C947	87-010-401-089		CAP,E 1-50 SME
C948	87-010-196-089		C-CAP,S 0.1-25 F<EE,EEZ,K,EZ>
C949	87-010-197-089		C-CAP,S 0.01-25 B
C951	87-010-401-089		CAP,E 1-50 SME
C952	87-010-311-089		C-CAP,S 12P-50 CH<HR,G>
C983	87-010-544-089		CAP,E 0.1-50
C987	87-015-819-089		CHIP CAP 0.01
C988	87-015-785-089		C-CAP,0.1-25 F
C990	87-010-197-089		C-CAP,S 0.01-25 B
C993	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C995	87-010-197-089		C-CAP,S 0.01-25 B
CF801	87-008-423-019		CF,SFE10.7 MS3G-A<EE,EEZ,K,EZ>
CF801	87-008-261-019		FLTR,SFE10.7MA5-A<HR,G>
CF802	82-785-747-019		CF,MS2 GHY,R<EE,EEZ,K,EZ>
CF802	87-008-261-019		FLTR,SFE10.7MA5-A<HR,G>
FFE801	85-NF5-605-019		FE PACK 2 EX<HR,G>
FFE802	85-NF5-604-019		FE PACK 4(AL)<EE,EEZ,K,EZ>
J250	87-099-794-019		JACK,6.3 W/S BLK
J253	87-099-801-019		JACK,PIN 1P BLK
J254	87-033-227-019		TERMINAL,SP 4P R (Z)
J652	87-099-814-019		JACK,PIN 3P WWW
J653	87-099-813-019		JACK,PIN 3P RRR
J801	87-033-235-019		TERM,ANT (H)<HR,G>
J801	87-033-230-019		TERM,ANT AJ-2016<EE,EEZ,K,EZ>
L201	87-003-383-019		COIL,1UH-S<EE,EEZ,K,EZ>
L202	87-003-383-019		COIL,1UH-S<EE,EEZ,K,EZ>
L403	81-598-635-019		COIL,TRAP BIAS
L404	81-598-635-019		COIL,TRAP BIAS
L451	87-007-336-019		COIL,OSC 85K BIAS
L701	81-631-643-019		COIL 1 POLE MPX
L702	81-631-643-019		COIL 1 POLE MPX
L741	87-006-253-019		COIL,FM DET N
L742	82-NT1-659-019		FLTR,CFAZ-450 2NT
L770	87-003-102-089		COIL,10UH
L832	87-003-098-089		COIL,2.2UH
L941	87-006-208-019		COIL, ANT LW<EE,EEZ,K,EZ>
L942	87-007-305-019		COIL OSC LW S<EE,EEZ,K,EZ>
L981	81-MX4-620-019		AM PACK 3,S<HR,G>
L981	81-MX4-619-019		AM PACK 4<EE,EEZ,K,EZ>
R105	87-022-600-089		RES,M/F 0.1-2W J
R106	87-022-600-089		RES,M/F 0.1-2W J
R203	87-022-603-089		RES,M/F 0.47-2W J
R204	87-022-603-089		RES,M/F 0.47-2W J
R205	87-022-603-089		RES,M/F 0.47-2W J
R206	87-022-603-089		RES,M/F 0.47-2W J
RY101	87-045-361-019		RELAY,DH12D2-OS(M)-2
SFR5	87-024-175-089		SFR,47K DIA6 V
SFR6	87-024-175-089		SFR,47K DIA6 V
SFR301	87-024-174-089		SFR33K DIA6 V
SFR302	87-024-174-089		SFR33K DIA6 V
SFR303	87-024-174-089		SFR33K DIA6 V
SFR304	87-024-174-089		SFR33K DIA6 V
SFR451	87-024-175-089		SFR,47K DIA6 V
SFR452	87-024-175-089		SFR,47K DIA6 V
SFR722	87-024-170-089		SFR,3.3K DIA6 V
TC701	87-011-253-089		TRIMER,30P LAR
TC942	87-011-253-089		TRIMER,30P LAR<EE,EEZ,K,EZ>
VR651	82-NF5-660-019		VR 50K BX2 RK14K 12A
W101	85-MA1-617-019		F-CABEL,7P-2.5
X703	84-508-618-019		VIB,CER CSB 456 F/5
X721	87-030-163-019		VIB,XTAL 7.2MHZ(NDK)
X901	87-030-348-089		VIB,CER 16.0MHZ CST<HR>

FRONT C.B

C101	87-010-318-089		C-CAP,S 47P-50 CH
C102	87-010-317-089		C-CAP,S 39P-50 CH
C103	87-010-315-089		C-CAP,S 27P-50 CH
C104	87-012-140-089		C-CAP,S 470P-50 CH
C105	87-010-196-089		C-CAP,S 0.1-25 F
C106	87-010-498-049		CAP,E 10-16 GAS
C107	87-010-555-049		CAP,E 100-10 GAS
C108	87-010-494-049		CAP,E 1-50 GAS
C109	87-010-494-049		CAP,E 1-50 GAS
C110	87-010-248-089		CAP,E 220-10 SME
C111	87-010-805-089		C-CAP,S 1-16F
C112	87-010-196-089		C-CAP,S 0.1-25 F
C113	87-010-196-089		C-CAP,S 0.1-25 F
C201	87-010-281-049		CAP,E 22-35 5L
C202	87-010-281-049		CAP,E 22-35 5L
C203	87-010-560-049		CAP,E 10-50 GAS
C204	87-010-197-089		C-CAP,S 0.01-25 B
C205	87-018-209-089		CAP,TC-U 0.1-50 F
C206	87-018-209-089		CAP,TC-U 0.1-50 F
C301	87-010-196-089		C-CAP,S 0.1-25 F

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C302	87-010-196-089		C-CAP,S 0.1-25 F
C303	87-010-196-089		C-CAP,S 0.1-25 F
C304	87-010-196-089		C-CAP,S 0.1-25 F
C305	87-010-196-089		C-CAP,S 0.1-25 F
C306	87-012-140-089		C-CAP,S 470P-50 CH
C501	87-010-112-089		CAP,E 100-16
C603	87-010-196-089		C-CAP,S 0.1-25 F
C610	87-012-142-089		C-CAP,S 0.33-16 F
FL201	85-MA2-608-019		FL,BJ375 GK
L201	87-003-149-089		COIL,47UH
LED201	87-017-731-080		LED,SEL1510CM2
LED202	87-017-731-080		LED,SEL1510CM2
LED203	87-017-731-080		LED,SEL1510CM2
LED204	87-017-731-080		LED,SEL1510CM2
LED205	87-017-731-080		LED,SEL1510CM2
LED206	87-017-731-080		LED,SEL1510CM2
LED207	87-017-731-080		LED,SEL1510CM2
LED208	87-017-731-080		LED,SEL1510CM2
LED209	87-017-731-080		LED,SEL1510CM2
LED210	87-017-731-080		LED,SEL1510CM2
LED211	87-017-785-080		LED,SEL 4214S
LED212	87-017-785-080		LED,SEL 4214S
LED213	87-017-785-080		LED,SEL 4214S
LED214	87-017-785-080		LED,SEL 4214S
LED215	87-017-785-080		LED,SEL 4214S
LED216	87-017-297-080		LED,SEL1550CM TP7
LED217	87-017-297-080		LED,SEL1550CM TP7
LED218	87-017-297-080		LED,SEL1550CM TP7
LED219	87-017-297-080		LED,SEL1550CM TP7
LED220	87-017-297-080		LED,SEL1550CM TP7
LED221	87-017-297-080		LED,SEL1550CM TP7
LED222	87-017-731-080		LED,SEL1510CM2
LED223	87-017-731-080		LED,SEL1510CM2
LED224	87-070-270-010		LED,SEL1510CM2 LF34
LED225	87-070-300-010		LED,SEL1250SM LF34
LED226	87-070-270-010		LED,SEL1510CM2 LF34
LED227	87-070-270-010		LED,SEL1510CM2 LF34
LED228	87-070-300-010		LED,SEL1250SM LF34
LED229	87-070-270-010		LED,SEL1510CM2 LF34
LED901	87-017-731-080		LED,SEL1510CM2
LED902	87-017-785-080		LED,SEL 4214S
LED903	87-017-785-080		LED,SEL 4214S
LED904	87-017-785-080		LED,SEL 4214S
LED905	87-017-785-080		LED,SEL 4214S
LED906	87-017-368-080		LED SEL4514C TP-5
LED907	87-017-368-080		LED SEL4514C TP-5
LED908	87-017-368-080		LED SEL4514C TP-5
LED909	87-017-368-080		LED SEL4514C TP-5
LED910	87-017-785-080		LED,SEL 4214S
LED911	87-017-785-080		LED,SEL 4214S
LED912	87-017-785-080		LED,SEL 4214S
R187	87-025-467-089		RES,NF 1-1/4 WJ
R188	87-025-467-089		RES,NF 1-1/4 WJ
S1	87-036-215-089		SW,TACT EVQ21404M<HR>
S2	87-036-215-089		SW,TACT EVQ21404M<HR>
S201	87-036-215-089		SW,TACT EVQ21404M
S202	87-036-215-089		SW,TACT EVQ21404M
S203	87-036-215-089		SW,TACT EVQ21404M
S204	87-036-215-089		SW,TACT EVQ21404M
S205	87-036-215-089		SW,TACT EVQ21404M
S206	87-036-215-089		SW,TACT EVQ21404M
S207	87-036-215-089		SW,TACT EVQ21404M
S208	87-036-215-089		SW,TACT EVQ21404M
S209	87-036-215-089		SW,TACT EVQ21404M
S210	87-036-215-089		SW,TACT EVQ21404M
S211	87-036-215-089		SW,TACT EVQ21404M
S212	87-036-215-089		SW,TACT EVQ21404M
S213	87-036-215-089		SW,TACT EVQ21404M
S214	87-036-215-089		SW,TACT EVQ21404M
S215	87-036-215-089		SW,TACT EVQ21404M
S216	87-036-215-089		SW,TACT EVQ21404M
S217	87-036-215-089		SW,TACT EVQ21404M
S218	87-036-215-089		SW,TACT EVQ21404M
S219	87-036-215-089		SW,TACT EVQ21404M
S220	87-036-215-089		SW,TACT EVQ21404M
S221	87-036-215-089		SW,TACT EVQ21404M
S222	87-036-215-089		SW,TACT EVQ21404M
S223	87-036-215-089		SW,TACT EVQ21404M
S224	87-036-215-089		SW,TACT EVQ21404M
S225	87-036-215-089		SW,TACT EVQ21404M
S226	87-036-215-089		SW,TACT EVQ21404M
S227	87-036-215-089		SW,TACT EVQ21404M
S228	87-036-397-089		SW,TACT SKQNAB
S229	87-036-397-089		SW,TACT SKQNAB
S230	87-036-397-089		SW,TACT SKQNAB
S231	87-036-397-089		SW,TACT SKQNAB
S232	87-036-397-089		SW,TACT SKQNAB
S233	87-036-215-089		SW,TACT EVQ21404M
S901	87-036-215-089		SW,TACT EVQ21404M
VR601	85-MA2-605-019		VR,10KB
VR602	85-MA3-604-019		VR,20KA MIC
VR901	85-MA1-607-019		VR,SL 50KB
W102	88-906-271-119		CABLE,FFC 6P-1.25
W103	85-MA2-618-019		CABLE FFC,13P-1.25
W104	85-MA2-602-019		CABLE,FFC 15P-1.25
W901	85-MA1-603-019		CABLE,FFC 12P-1.25
X101	87-030-376-089		VIB,CER CSA5.76MG200

VOL C.B

C701	87-010-402-089		CAP,E 2.2-50 SME
C702	87-010-402-089		CAP,E 2.2-50 SME
C703	87-010-322-089		C-CAP,S 100P-50 CH
C704	87-010-322-089		C-CAP,S 100P-50 CH
C705	87-016-073-089		CAP,E 1-50 FX
C706	87-016-073-089		CAP,E 1-50 FX
C707	87-010-805-089		C-CAP,S 1-16F
C708	87-010-805-089		C-CAP,S 1-16F
C709	87-010-403-089		CAP,E 3.3-50 SME
C710	87-010-403-089		CAP,E 3.3-50 SME
C711	87-010-322-089		C-CAP,S 100P-50 CH
C712	87-010-322-089		C-CAP,S 100P-50 CH
C713	87-010-318-089		C-CAP,S 47P-50 CH
C714	87-010-318-089		C-CAP,S 47P-50 CH
C715	87-010-401-089		CAP,E 1-50 SME
C716	87-010-401-089		CAP,E 1-50 SME
C717	87-010-381-089		CAP,E 330-16 SME
C718	87-015-692-089		CAP,E 0.22-50 7L
C719	87-015-696-089		CAP,E 2.2-50 7L
C720	87-010-401-089		CAP,E 1-50 SME
C722	87-010-370-089		CAP,E 330-6.3 SME
C723	87-010-194-089		C-CAP,S 0.047-25 F
C724	87-010-194-089		C-CAP,S 0.047-25 F
C725	87-010-380-089		CAP,E 47-16 SME
C727	87-012-157-089		C-CAP,S 330P-50 CH
C728	87-012-157-089		C-CAP,S 330P-50 CH
C731	87-010-197-089		C-CAP,S 0.01-25 B
C732	87-010-197-089		C-CAP,S 0.01-25 B
C751	87-010-318-089		C-CAP,S 47P-50 CH<EE,EZ,K,EZ>
C752	87-010-318-089		C-CAP,S 47P-50 CH<EE,EZ,K,EZ>
C753	87-010-197-089		C-CAP,S 0.01-25 B<EE,EZ,K,EZ>
C801	87-016-460-089		C-CAP,S 0.22-16 B
C802	87-016-460-089		C-CAP,S 0.22-16 B
C803	87-016-526-089		C-CAP,S 0.47-16 BK
C804	87-016-526-089		C-CAP,S 0.47-16 BK
C805	87-016-552-089		C-CAP,S 0.082-16 B K
C806	87-016-552-089		C-CAP,S 0.082-16 B K
C807	87-016-460-089		C-CAP,S 0.22-16 B
C808	87-016-460-089		C-CAP,S 0.22-16 B
C809	87-016-369-089		C-CAP,S 0.033-25 B K

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C810	87-016-369-089		C-CAP,S 0.033-25 B K
C811	87-016-552-089		C-CAP,S 0.082-16 B K
C812	87-016-552-089		C-CAP,S 0.082-16 B K
C813	87-010-426-089		C-CAP,S 0.012-25 B
C814	87-010-426-089		C-CAP,S 0.012-25 B
C815	87-012-365-089		C-CAP,S 0.027-25V BK
C816	87-012-365-089		C-CAP,S 0.027-25V BK
C817	87-010-186-089		C-CAP,S 4700P-50 B
C818	87-010-186-089		C-CAP,S 4700P-50 B
C819	87-010-197-089		C-CAP,S 0.01-25 B
C820	87-010-197-089		C-CAP,S 0.01-25 B
C821	87-010-181-089		C-CAP,S 1800P-50 B
C822	87-010-181-089		C-CAP,S 1800P-50 B
C823	87-010-186-089		C-CAP,S 4700P-50 B
C824	87-010-186-089		C-CAP,S 4700P-50 B
C825	87-010-177-089		C-CAP,S 820P-50 SL
C826	87-010-177-089		C-CAP,S 820P-50 SL
C827	87-010-181-089		C-CAP,S 1800P-50 B
C828	87-010-181-089		C-CAP,S 1800P-50 B
C829	87-010-404-089		CAP,E 4.7-50 SME
C830	87-010-404-089		CAP,E 4.7-50 SME
C831	87-010-379-089		CAP,E 22-16 SME
C832	87-010-379-089		CAP,E 22-16 SME
C833	87-012-157-089		C-CAP,S 330P-50 CH
C834	87-012-157-089		C-CAP,S 330P-50 CH
C835	87-010-196-089		C-CAP,S 0.1-25 F
C836	87-010-101-089		CAP,E 220-16 SME
C837	87-010-805-089		C-CAP,S 1-16F
C838	87-010-101-089		CAP,E 220-16 SME
C840	87-010-101-089		CAP,E 220-16 SME
C851	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C901	87-010-805-089		C-CAP,S 1-16F
C902	87-010-805-089		C-CAP,S 1-16F
C903	87-010-452-089		C-CAP,1-16 F
C904	87-010-452-089		C-CAP,1-16 F
MVR701	85-MA1-605-019		VOL,MOT 50KBX4
R729	87-010-263-089		CAP,E 100-10 SME 5X11
R730	87-010-263-089		CAP,E 100-10 SME 5X11
W902	85-MA1-602-019		CABLE,FFC 8P-1.25

JACK C.B

C601	87-010-677-089		CAP,E 0.15-50 7L
C602	87-012-154-089		C-CAP,S 150P-50 CH
C604	87-010-322-089		C-CAP,S 100P-50 CH
C605	87-012-157-089		C-CAP,S 330P-50 CH
C606	87-010-112-089		CAP,E 100-16
C607	87-010-494-049		CAP,E 1-50 GAS
C608	87-010-406-049		CAP,E 22-50 SME
C609	87-010-263-049		CAP,E 100-10
C611	87-010-494-049		CAP,E 1-50 GAS
C612	87-010-196-089		C-CAP,S 0.1-25 F
J601	87-099-659-019		JACK,6.3 JY-6314-01130
J602	87-099-659-019		JACK,6.3 JY-6314-01130

CD KEY C.B

C401	87-010-197-089		C-CAP,S 0.01-25 B
LED401	87-070-271-080		LED,SEL6215S TP1
LED402	87-070-271-080		LED,SEL6215S TP1
LED403	87-070-271-080		LED,SEL6215S TP1
S401	87-036-215-089		SW,TACT EVQ21404M
S402	87-036-215-089		SW,TACT EVQ21404M
S403	87-036-215-089		SW,TACT EVQ21404M
S404	87-036-215-089		SW,TACT EVQ21404M
S405	87-036-215-089		SW,TACT EVQ21404M
W401	85-MA2-604-119		F-CABLE,6P-2.0

AC-2 C.B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
⚠	87-033-213-089		CLAMP FUSE SMK
⚠F102	87-035-369-019		FUSE,5A 250V TE
⚠F103	87-035-369-019		FUSE,5A 250V TE
⚠PR903	87-026-681-089		PROTECTOR,5A 60V 491
⚠PR904	87-026-681-089		PROTECTOR,5A 60V 491
⚠PT101	85-MA1-608-019		PT,5MA-1 EZ<EE,EEZ,K,EZ>
⚠PT101	85-MA1-606-019		PT,5MA-1 HE<HR,G>

PT C.B<HR,G>

⚠	87-033-147-019		CLAMP,FUSE<HR,G>
⚠	82-304-743-019		TERMINAL,1P<HR,G>
⚠F101	87-035-367-019		FUSE,3.15A 250V T E<HR>
⚠F101	87-035-365-019		FUSE,2A 250V T E<G>
⚠SW101	87-036-387-019		SW,SL 1-2-3<HR>

AC-1 C.B<EE,EEZ,K,EZ>

⚠	87-033-213-089		CLAMP FUSE SMK<EE,EEZ,K,EZ>
⚠	82-304-743-019		TERMINAL,1P<EE,EEZ,K,EZ>
⚠F101	87-035-365-019		FUSE,2A 250V T E<EE,EEZ,K,EZ>

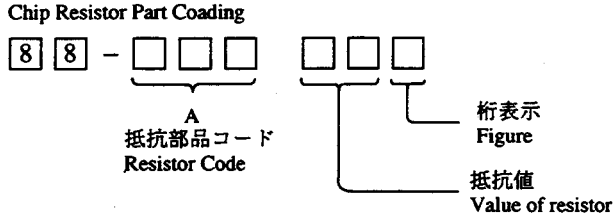
PRO/DSP C.B

C101	87-012-393-089		C-CAP,S 0.22-16,R,K
C102	87-012-393-089		C-CAP,S 0.22-16,R,K
C103	87-012-393-089		C-CAP,S 0.22-16,R,K
C104	87-010-404-089		CAP,E 4.7-50 SME
C105	87-010-404-089		CAP,E 4.7-50 SME
C106	87-012-393-089		C-CAP,S 0.22-16,R,K
C107	87-016-081-089		C-CAP,S 0.1-16 RK
C108	87-016-081-089		C-CAP,S 0.1-16 RK
C109	87-016-081-089		C-CAP,S 0.1-16 RK
C110	87-016-081-089		C-CAP,S 0.1-16 RK
C113	87-010-176-089		C-CAP,S 680P-50 SL
C117	87-010-176-089		C-CAP,S 680P-50 SL
C119	87-016-456-089		CAP,E 22-16 LLA
C120	87-010-405-089		CAP,E 10-50 SME
C123	87-010-405-089		CAP,E 10-50 SME
C124	87-010-405-089		CAP,E 10-50 SME
C125	87-010-186-089		C-CAP,S 4700P-50 B
C126	87-016-472-089		CAP,E 22-16,SME (K)
C127	87-010-405-089		CAP,E 10-50 SME
C128	87-010-405-089		CAP,E 10-50 SME
C129	87-010-384-089		CAP,E 100-25 SME
C130	87-010-248-089		CAP,E 220-10 SME
C132	87-012-394-089		C-CAP,0.68-16,R,K
C201	87-010-197-089		C-CAP,S 0.01-25 B
C301	87-010-197-089		C-CAP,S 0.01-25 B
C302	87-010-402-089		CAP,E 2.2-50 SME
C303	87-010-404-089		CAP,E 4.7-50 SME
C331	87-012-393-089		C-CAP,S 0.22-16,R,K
C351	87-010-402-089		CAP,E 2.2-50 SME
C352	87-010-196-089		C-CAP,S 0.1-25 F
C411	87-010-248-089		CAP,E 220-10 SME
C415	87-010-402-089		CAP,E 2.2-50 SME
C452	87-010-263-089		CAP,E 100-10 SME 5X11
C457	87-010-402-089		CAP,E 2.2-50 SME
C458	87-010-402-089		CAP,E 2.2-50 SME
C459	87-010-405-089		CAP,E 10-50 SME
C501	87-010-177-089		C-CAP,S 820P-50 SL
C502	87-010-179-089		C-CAP,S 1200P-50 B
C503	87-010-263-089		CAP,E 100-10 SME 5X11
C504	87-010-263-089		CAP,E 100-10 SME 5X11
C505	87-010-196-089		C-CAP,S 0.1-25 F
C507	87-010-317-089		C-CAP,S 39P-50 CH
C508	87-010-151-089		C-CAP,S 7P-50 CH
C510	87-010-197-089		C-CAP,S 0.01-25 B
C512	87-010-179-089		C-CAP,S 1200P-50 B
C513	87-010-195-089		C-CAP,S 0.068-25 F

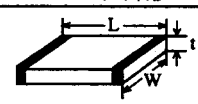
REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C514	88-707-919-819		CAP,M 0.1-50 J TF
C515	88-707-919-819		CAP,M 0.1-50 J TF
C516	87-010-195-089		C-CAP,S 0.068-25 F
C517	87-010-404-089		CAP,E 4.7-50 SME
C518	87-010-404-089		CAP,E 4.7-50 SME
C519	87-010-187-089		C-CAP,S 5600P-50 B
C520	87-010-182-089		C-CAP,S 2200P-50 B
C521	87-012-141-089		C-CAP,S 0.22-16 F
C524	87-010-184-089		C-CAP,S 3300P-50 B
C601	87-010-196-089		C-CAP,S 0.1-25 F
C602	87-018-209-089		CAP,TC-U 0.1-50 F
C603	87-010-196-089		C-CAP,S 0.1-25 F
C604	87-012-140-089		C-CAP,S 470P-50 CH
C611	87-012-140-089		C-CAP,S 470P-50 CH
C612	87-012-140-089		C-CAP,S 470P-50 CH
C615	87-010-194-089		C-CAP,S 0.047-25 F
C621	87-010-260-089		CAP,E 47-25 SME
C622	87-010-147-089		C-CAP,S 3P-50 CH
C623	87-010-147-089		C-CAP,S 3P-50 CH
C626	87-010-197-089		C-CAP,S 0.01-25 B<EE,EEZ,K,EZ>
C627	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C628	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C629	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C630	87-010-318-089		C-CAP,S 47P-50 CH<EE,EEZ,K,EZ>
C631	87-010-993-089		C-CAP,S 0.056-25 B
C632	87-010-993-089		C-CAP,S 0.056-25 B
C633	87-010-196-089		C-CAP,S 0.1-25 F
C651	87-010-178-089		C-CAP,S 1000P-50 B
C652	87-010-178-089		C-CAP,S 1000P-50 B
C653	87-010-197-089		C-CAP,S 0.01-25 B
C720	87-010-398-099		CAP,E 2200-35V
C721	87-010-398-099		CAP,E 2200-35V
C722	87-012-369-089		C-CAP,S,0.047-50 F
C723	87-012-369-089		C-CAP,S,0.047-50 F
J101	87-099-803-019		JACK,PIN 3P OWR
L501	87-005-487-089		COIL 150UH
L601	87-003-383-089		COIL,1UH-S
L602	87-003-383-089		COIL,1UH-S
R117	87-025-407-089		RES,M/F 100K-1/8W
R635	88-130-100-089		RES,10-1/4W J
R636	88-130-100-089		RES,10-1/4W J
R703	87-022-050-089		RESIS METAL 1W-0.22J
R708	87-022-050-089		RESIS METAL 1W-0.22J
DECK C.B			
SFR1	87-024-581-010		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-310		SOL ASSY,27
SOL2	82-ZM1-618-310		SOL ASSY,27
SW1	87-036-378-010		SW,PUSH 1-1-1 SH2
SW2	87-036-378-010		SW,PUSH 1-1-1 SH2
SW3	87-036-378-010		SW,PUSH 1-1-1 SH2
SW4	87-036-378-010		SW,PUSH 1-1-1 SH2
SW5	87-036-378-010		SW,PUSH 1-1-1 SH2
SW6	87-036-378-010		SW,PUSH 1-1-1 SH2
SW7	87-036-378-010		SW,PUSH 1-1-1 SH2
SW8	87-036-378-010		SW,PUSH 1-1-1 SH2
RELAY-1 C.B			
RELAY-2 C.B			
W105	83-NEG-608-019		CONN ASSY 8P-RPB

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coading

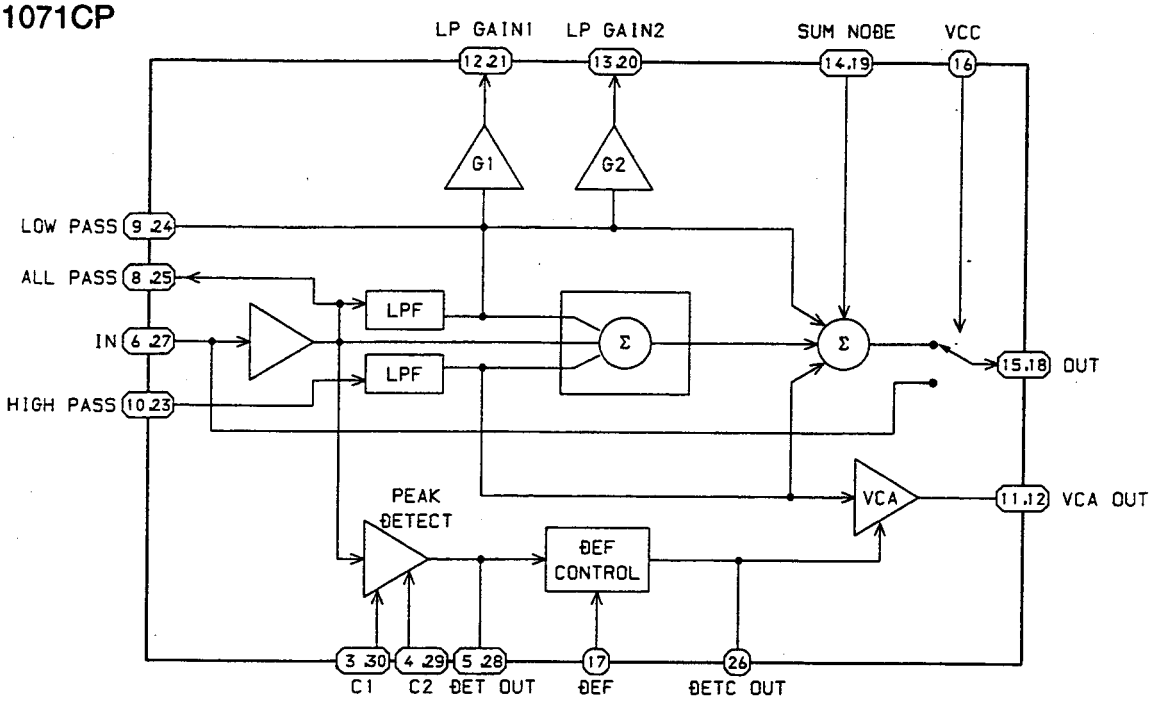


チップ抵抗
Chip resistor

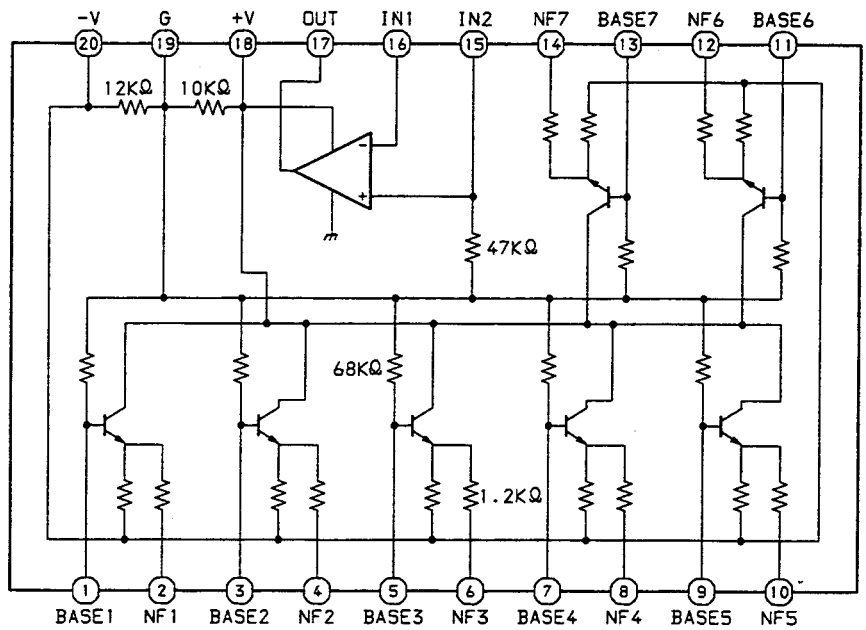
Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm) Form／外形	L	W	t	Resistor Code: ▲ 抵抗コード :▲
1／32W	1608	±5%	CJ		1.6	0.8	0.35	108
1／10W	2125	±5%	CJ		2	1.25	1.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.5 ~0.7	128

IC BLOCK DIAGRAM

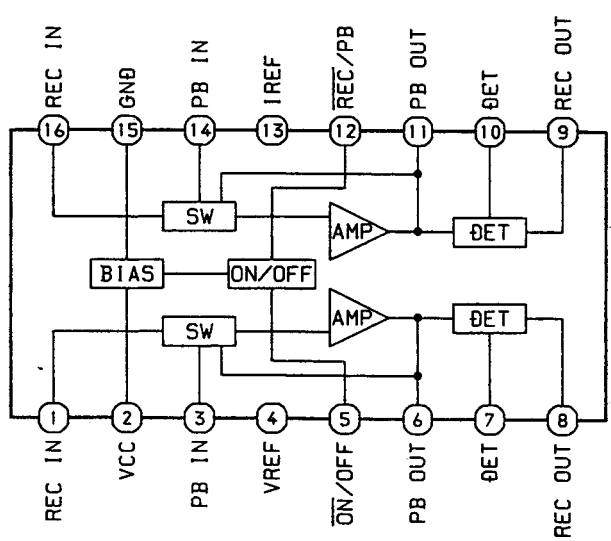
IC, XR1071CP



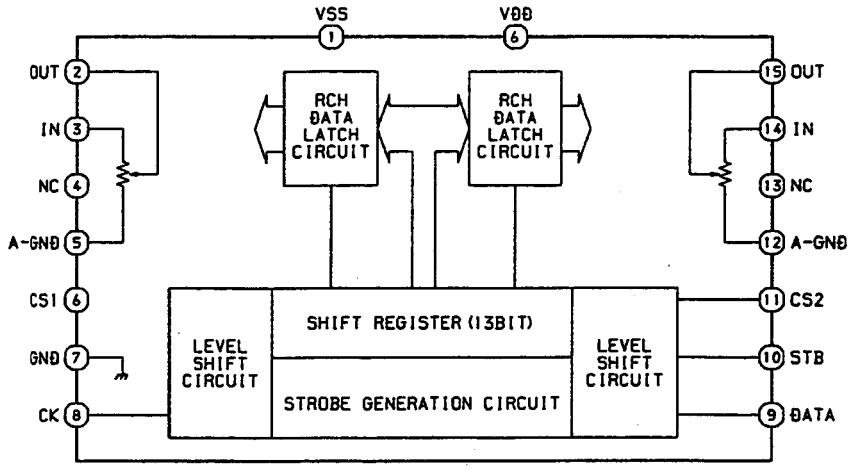
IC, LA3607


-V G +V OUT IN1 IN2 NF7 BASE7 NF6 BASE6
20 19 18 17 16 15 14 13 12 11
12KΩ
10KΩ
47KΩ
68KΩ
1.2KΩ
1 2 3 4 5 6 7 8 9 10
BASE1 NF1 BASE2 NF2 BASE3 NF3 BASE4 NF4 BASE5 NF5

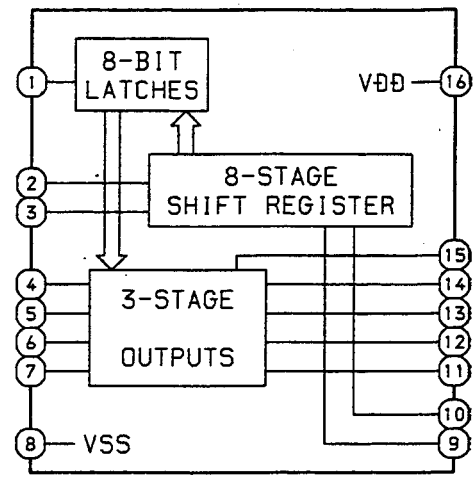
IC, HA12134A



IC, TC9299P



IC, TC4094BP

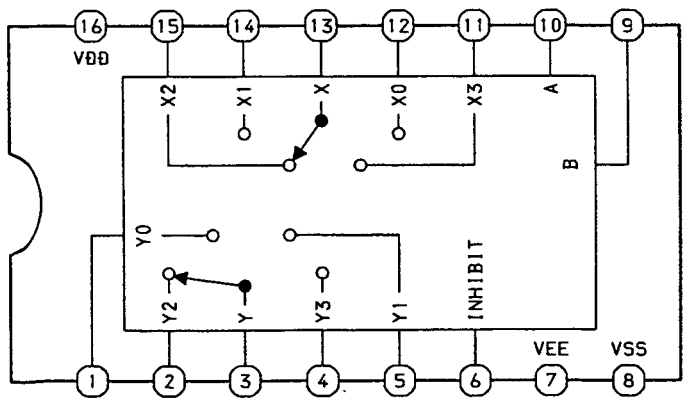


TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUT		SERIAL OUTPUT	
				Q1	Qn	Qs	Q's
↓	L	X	X	Z	Z	Q7	No chg.
↑	L	X	X	Z	Z	No chg.	Qs
↓	H	L	X	No chg.	No chg.	Q7	No chg.
↓	H	H	L	L	Qn-1	Q7	No chg.
↓	H	H	H	H	Qn-1	Q7	No chg.
↑	H	X	X	No chg.	No chg.	No chg.	Qs

Z= High Impedance
X= Don't Care

IC, TC4052

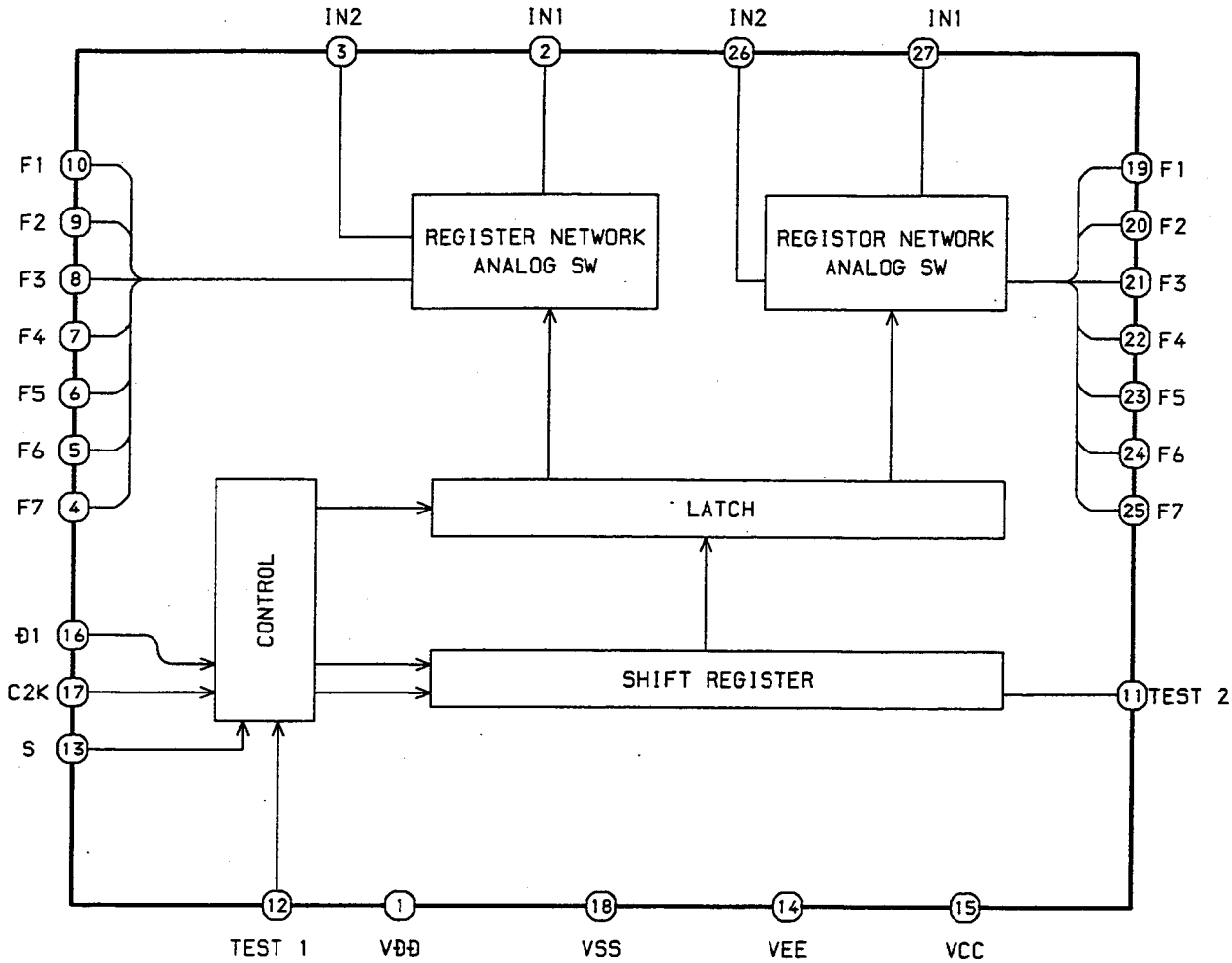


TRUTH TABLE

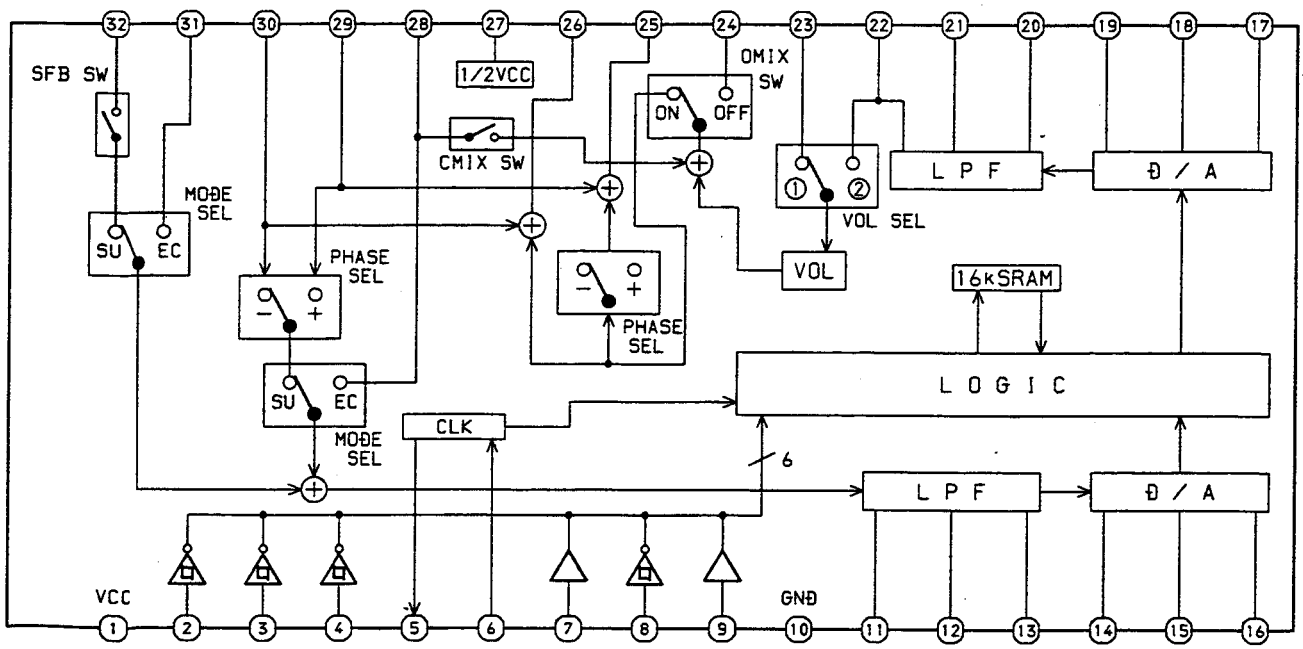
CONTROL INPUTS			ON SWITCH	
INHIBIT	B	A		
L	L	L	Y0	X0
L	L	H	Y1	X1
L	H	L	Y2	X2
L	H	H	Y3	X3
H	X	X	—	—

L:LOW LEVEL
H:HIGH LEVEL
H: IRRELEVANT

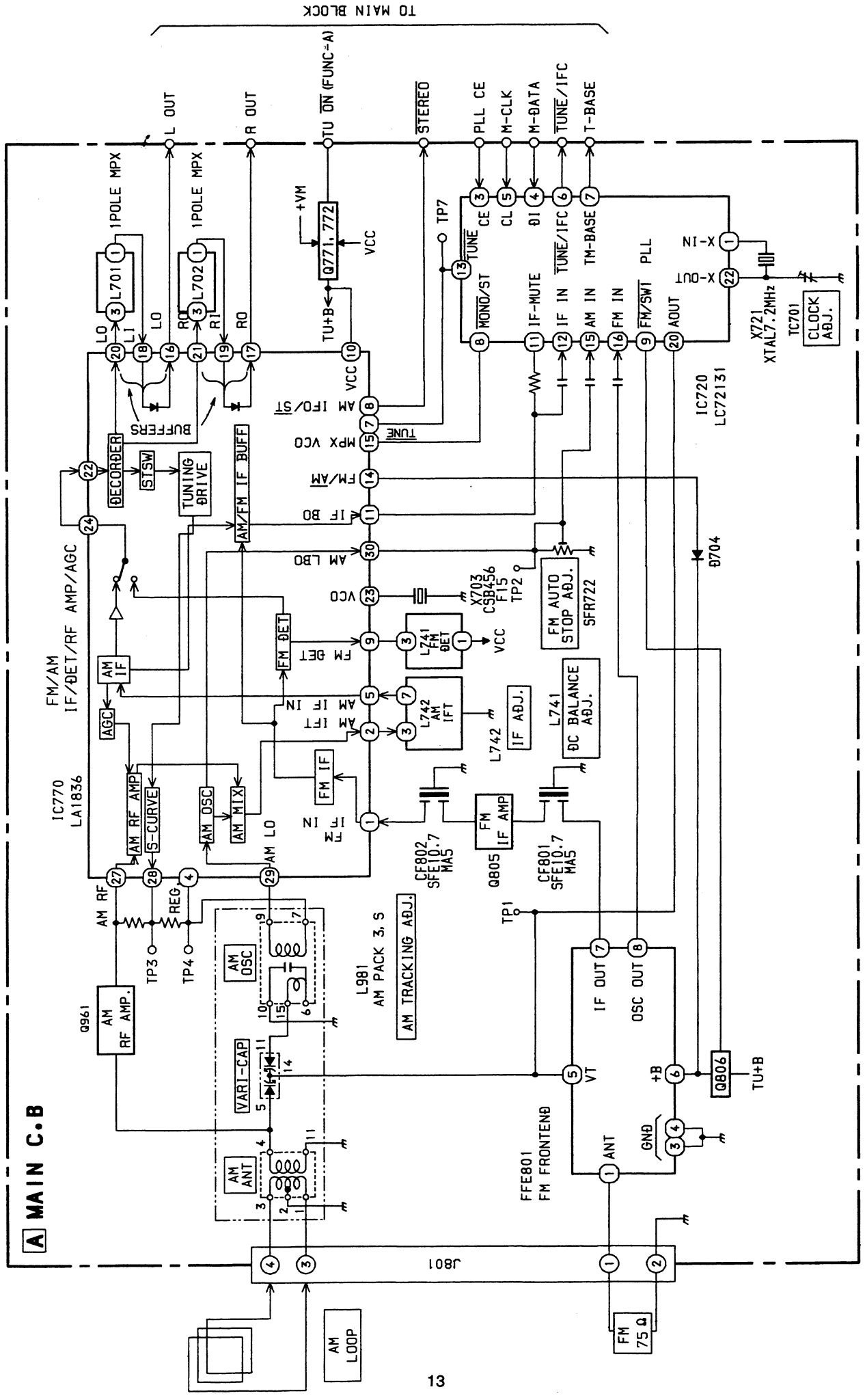
IC, LC7522



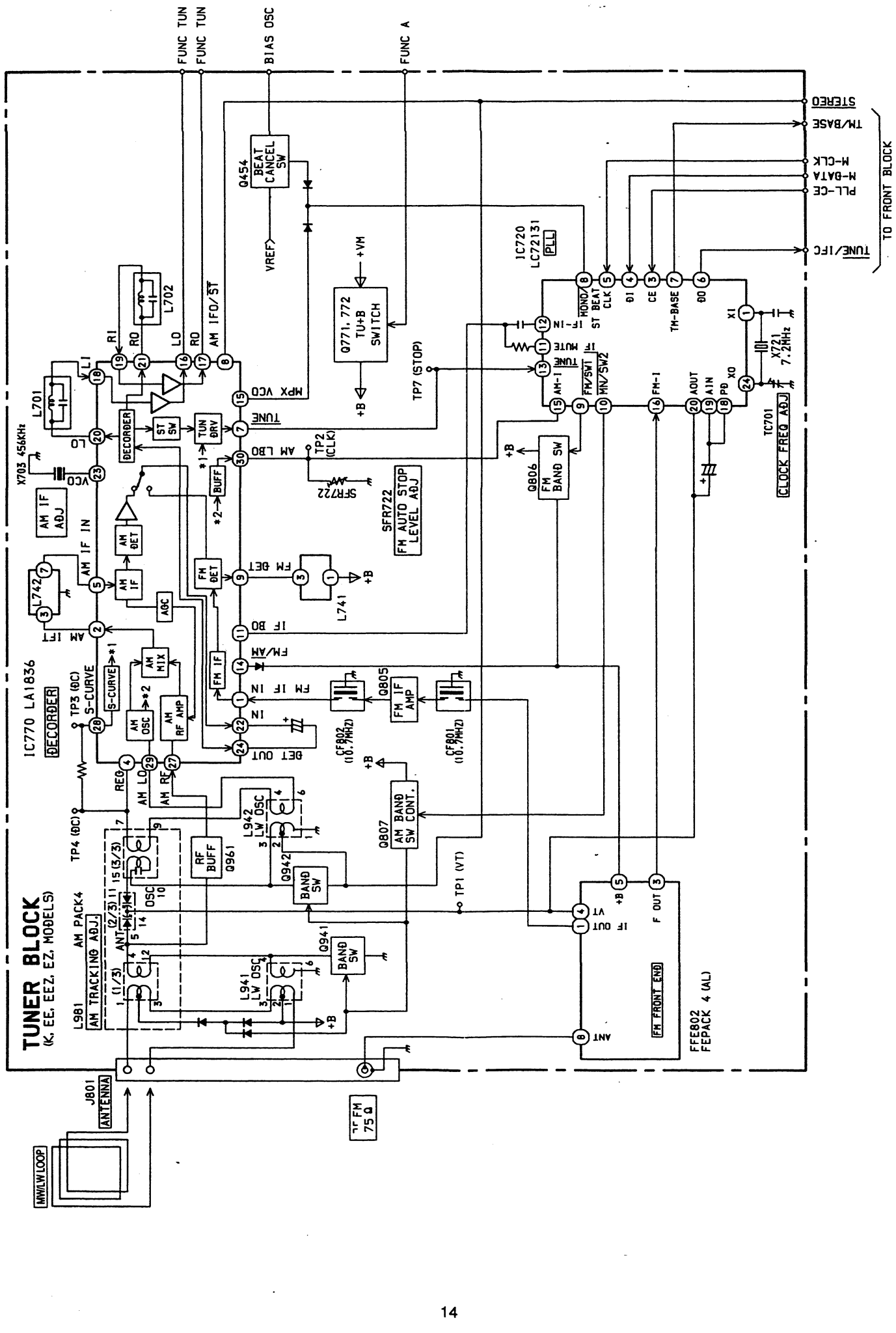
IC, M65846FP



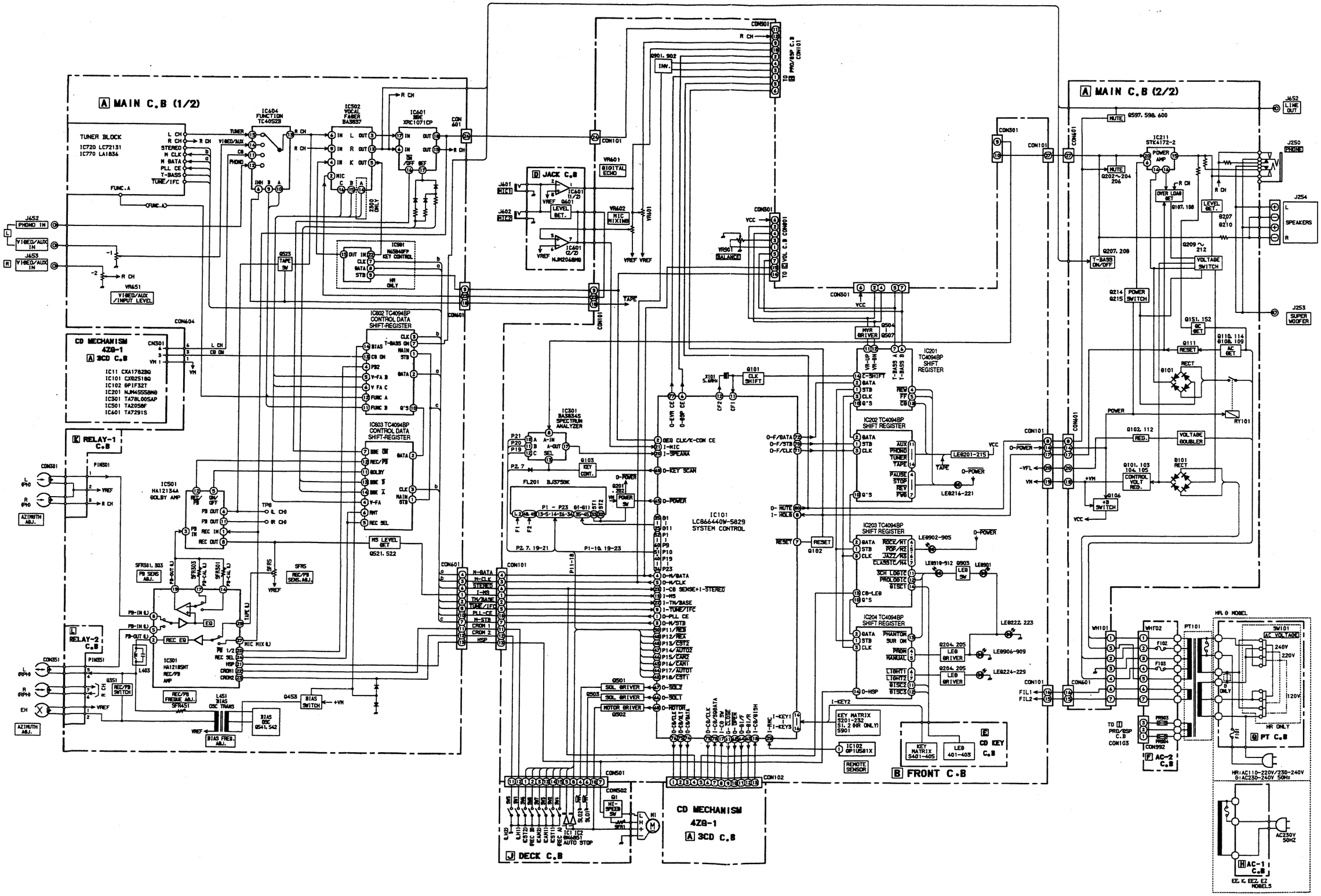
BLOCK DIAGRAM-1 (TUNER: HR, G)



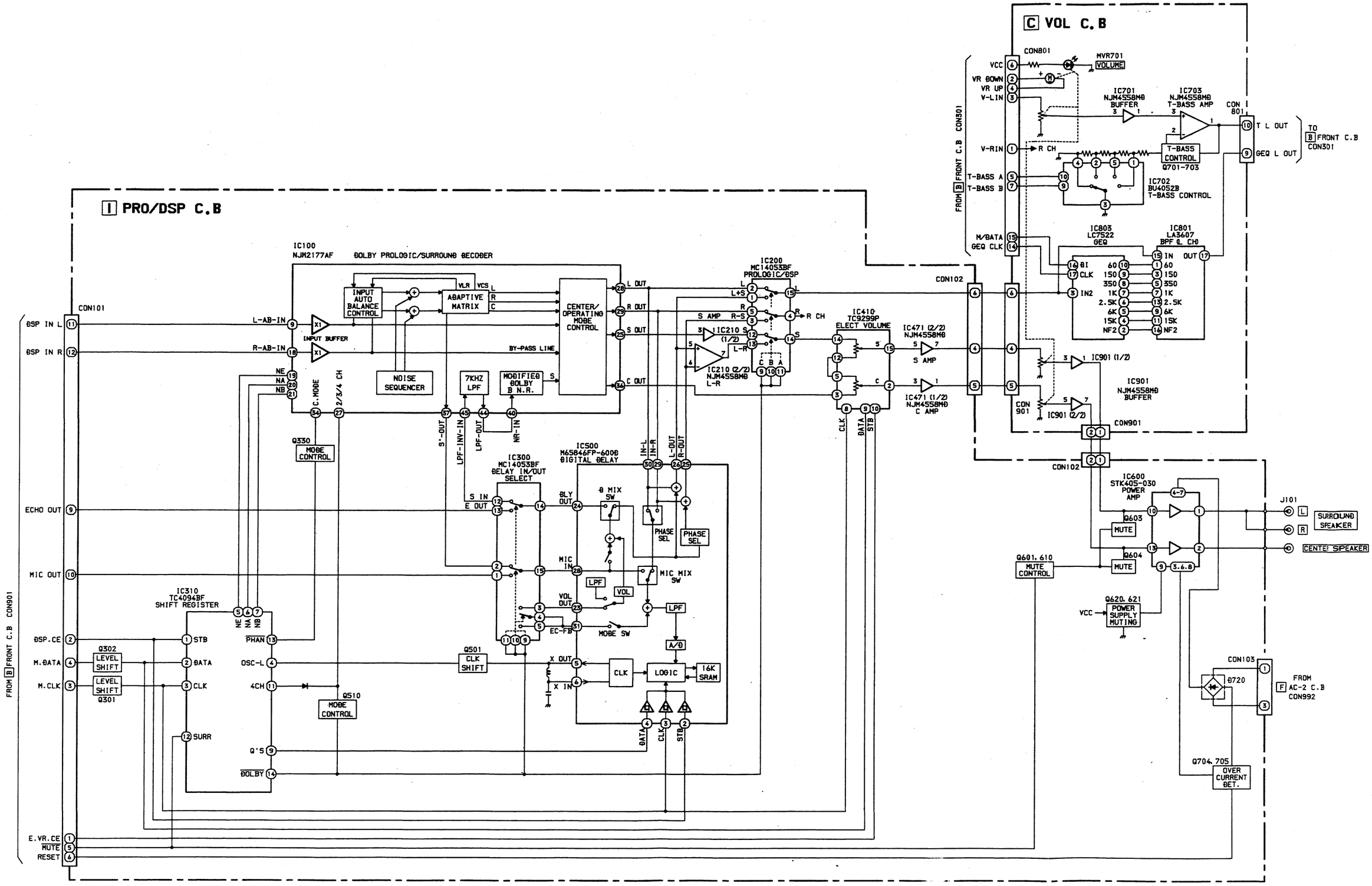
BLOCK DIAGRAM-2 (TUNER: EE, K, EEZ, EZ)



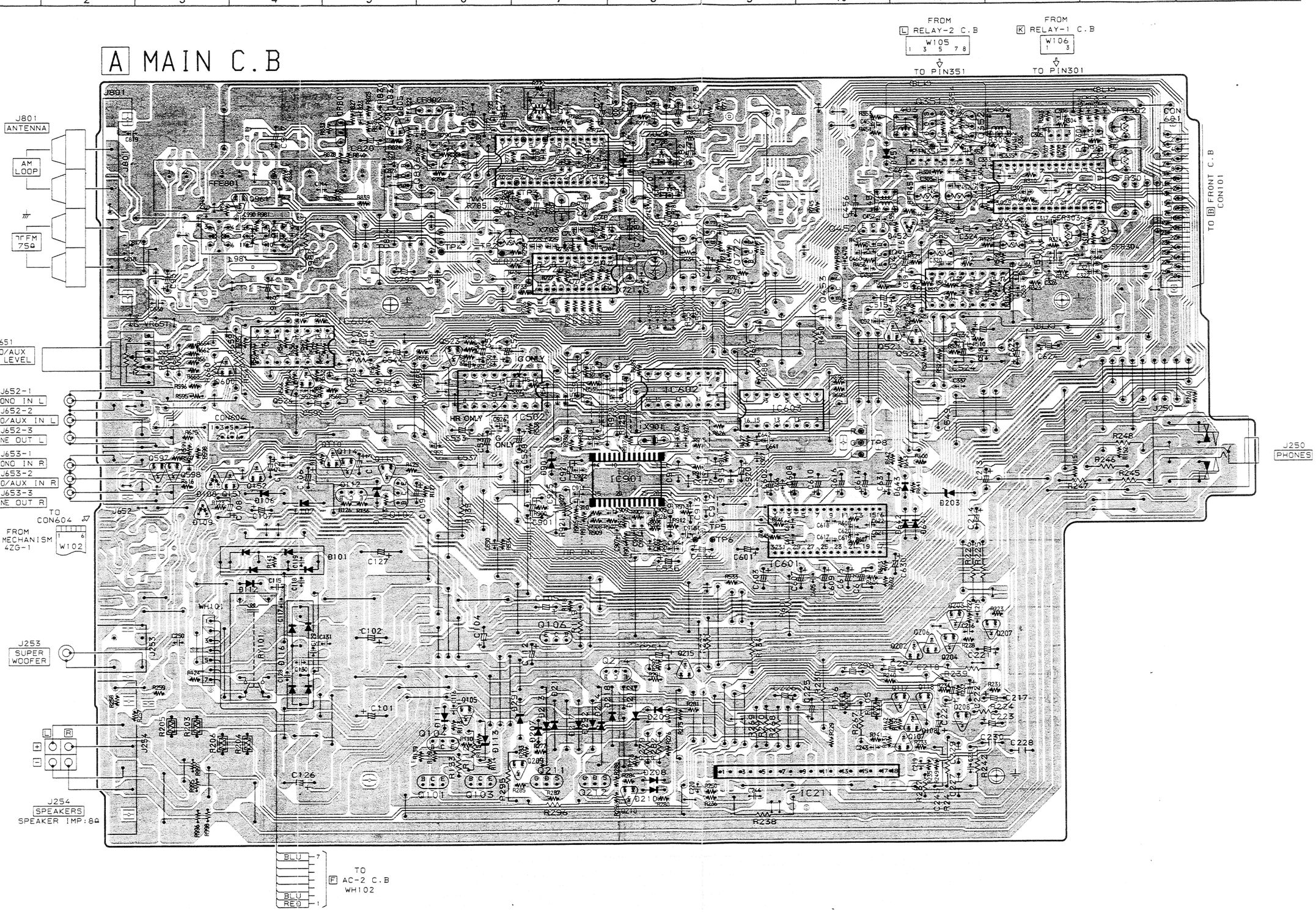
BLOCK DIAGRAM-3 (MAIN)



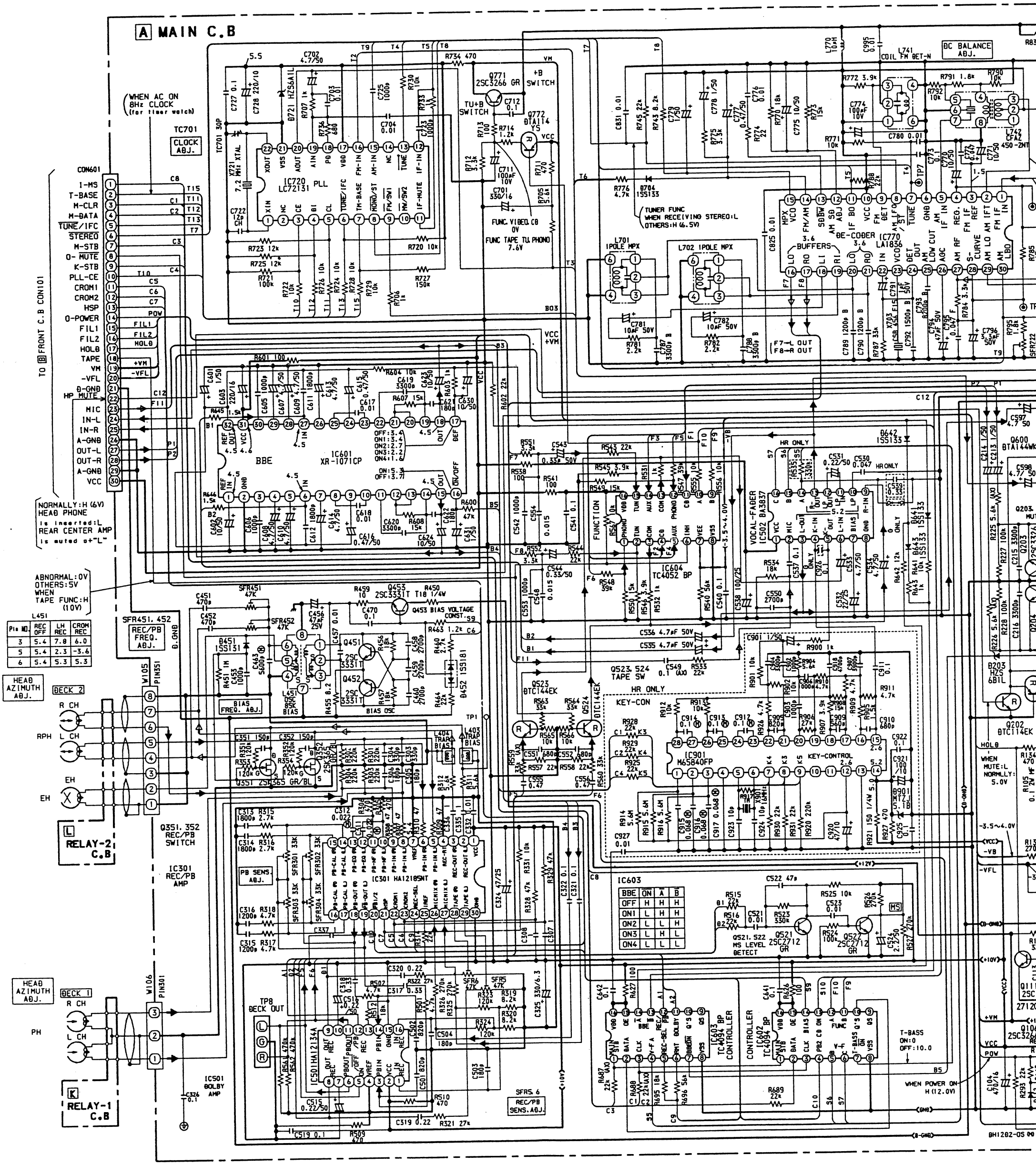
BLOCK DIAGRAM-4 (PRO／DSP, VOLUME)

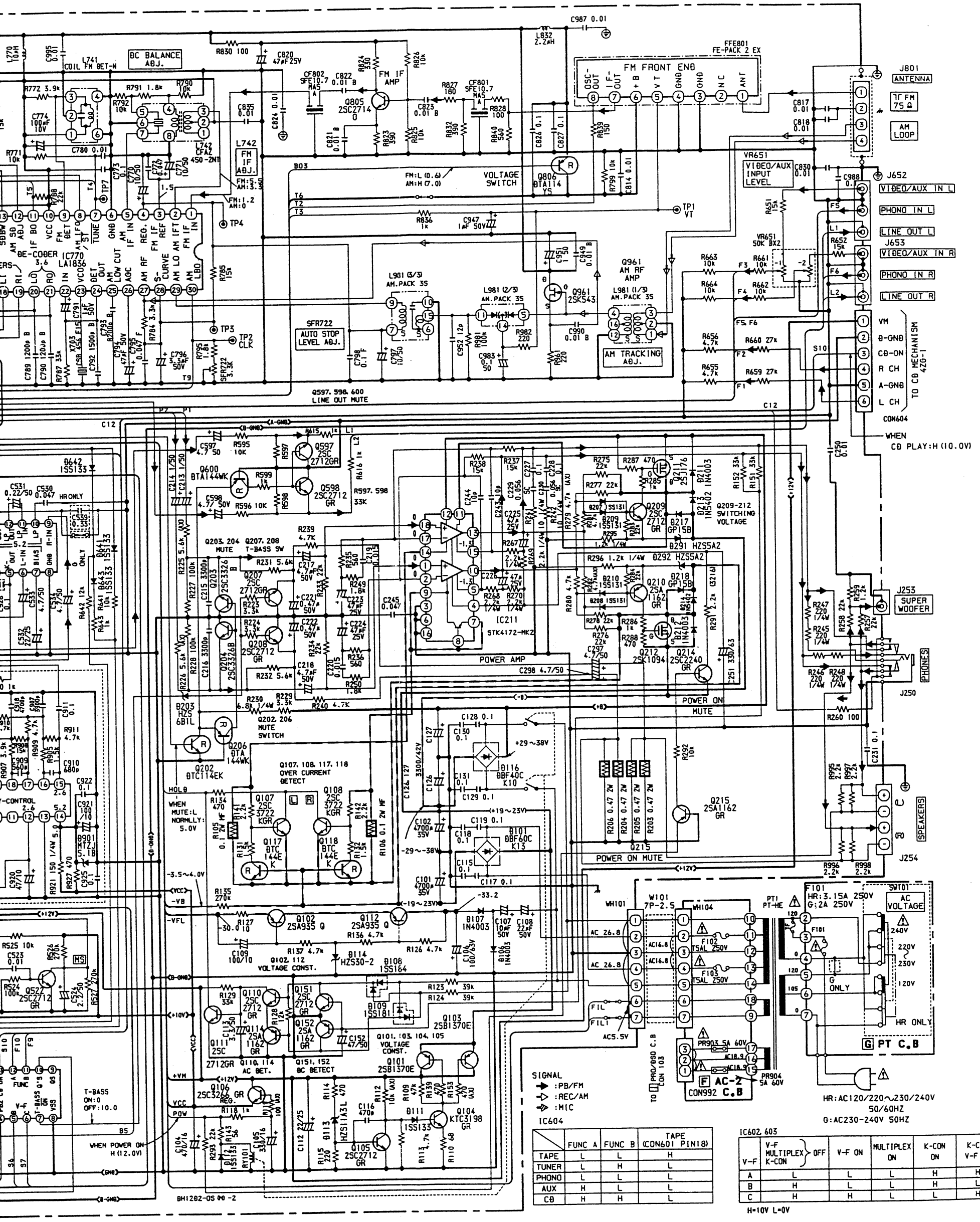


A MAIN C.B

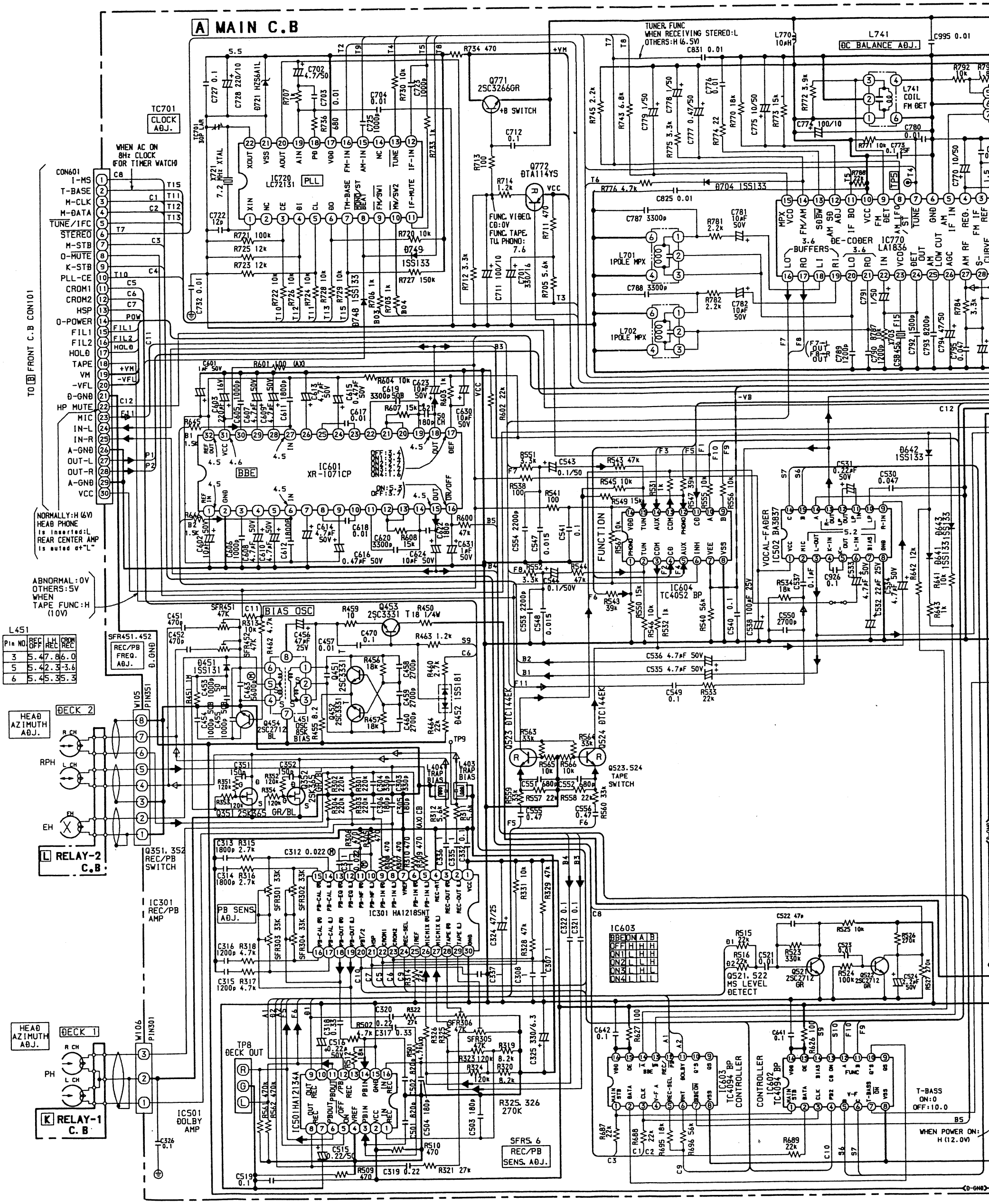

FROM L RELAY-2 C.B
W105
TO PIN351
FROM K RELAY-1 C.B
W106
TO PIN301
J801 ANTENNA
AM LOOP
FFM 75Ω
VR651 VIDEO/AUX INPUT LEVEL
J652-1 PHONO IN L
J652-2 VIDEO/AUX IN L
J652-3 LINE OUT L
J653-1 PHONO IN R
J653-2 VIDEO/AUX IN R
J653-3 LINE OUT R
TO CON604
FROM CD MECHANISM 4ZG-1
W102
J253 SUPER WOOFER
J254 SPEAKERS
SPEAKER IMP:8Ω
TO F AC-2 C.B
WH102
BLU
RED
TO B FRONT C.B
CON101
J250 PHONES
HR ONLY
G ONLY
IC501
IC502
IC901
IC601
IC211
IC2T1
X901
X721
X703
TP4
TP5
TP6
TP8
TP12
CON604
CON601
J801
J652
J253
J254
J250

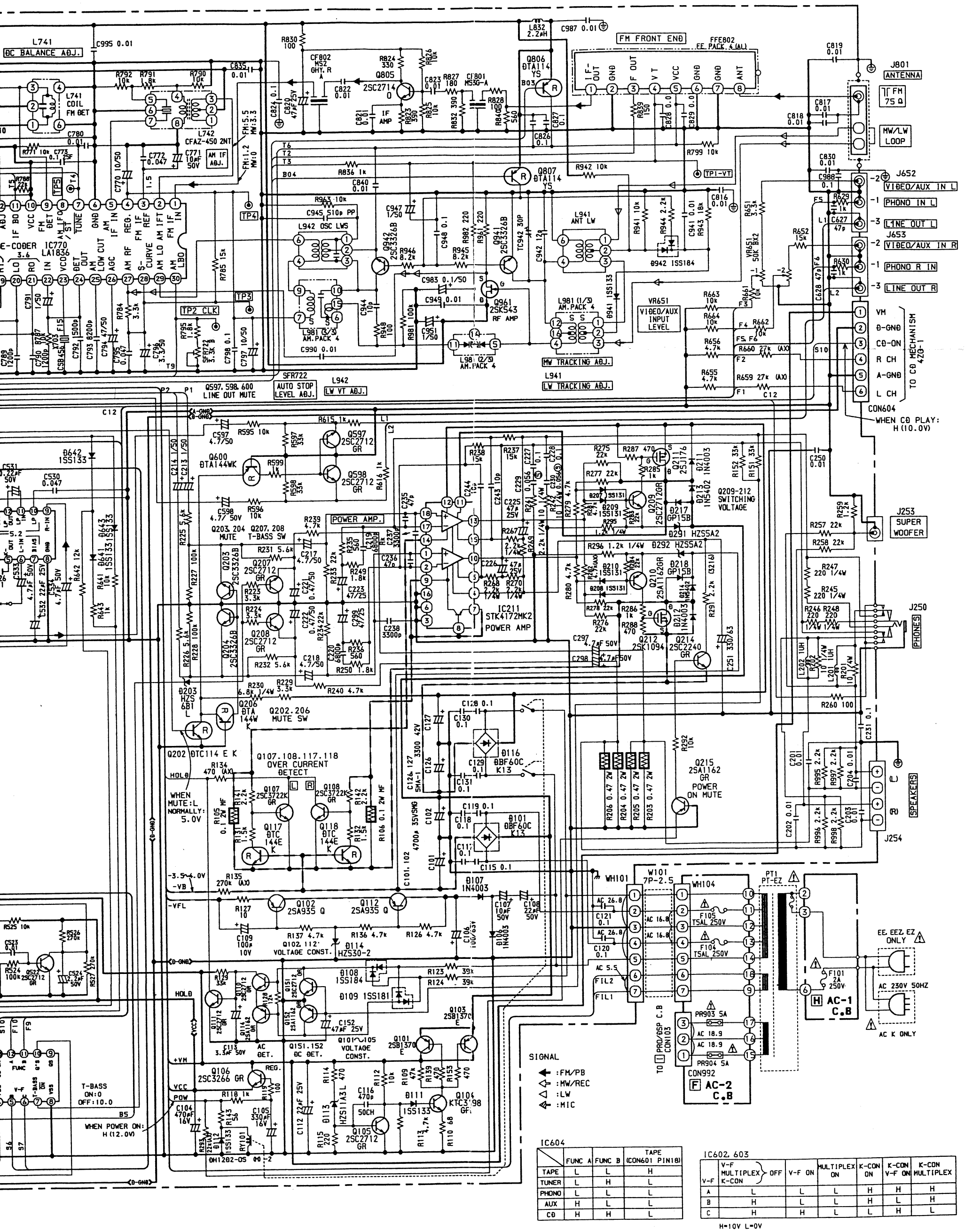
SCHEMATIC DIAGRAM-1 (MAIN: HR, G)




FM FRONT END
FFE801 FE-PACK 2 EX
OSC-OUT
IF-OUT
+B
VT
GND
GND
NC
ANT
J801 ANTENNA
TF FM 75Ω
AM LOOP
J652
VIDEO/AUX IN L
PHONO IN L
LINE OUT L
J653
VIDEO/AUX IN R
PHONO IN R
LINE OUT R
TO CD MECHANISM 4ZG-1
VM
θ-GNDθ
CDθ-ON
R CH
A-GNDθ
L CH
CON604
WHEN CD PLAY:H (10.0V)
VOLTAGE SWITCH
Q806 DTA114 YS
FM:L (0.6) AM:H (7.0)
FM:5 AM:3.5
FM:1.2 AM:0
TP1 VT
TP2 CLK
TP3
TP4
TP7
VR651 VIDEO/AUX INPUT LEVEL
VR651 50K BX2
Q961 AM RF AMP
Q961 2SK543
L981 (3/3) AM.PACK 3S
L981 (2/3) AM.PACK 3S
L981 (1/3) AM.PACK 3S
AM TRACKING ADJ.
SFR722 AUTO STOP LEVEL ADJ.
AM BALANCE ADJ.
FM IF ADJ.
COIL FM DET-N
DE-CODER (C770 LA1836)
Q597. 598. 600 LINE OUT MUTE
FM IF AMP
Q805 2SC2714 O
IC211 STK4172-MK2
POWER AMP
Q203. 204 Q207. 208 MUTE T-BASS SW
Q202. 206 MUTE SWITCH
Q107. 108. 117. 118 OVER CURRENT DETECT
HOLD WHEN MUTE:L NORMLLY: 5.0V
Q102. 112 VOLTAGE CONST.
Q101. 103. 104. 105 VOLTAGE CONST.
Q151. 152 DC DETECT
Q110. 114 AC DET.
POWER ON MUTE
Q209-212 SWITCHING VOLTAGE
SUPER WOOFER
PHONES
SPEAKERS
J254
J250
J253
SIGNAL
:PB/FM
:REC/AM
:MIC
IC604
FUNC A
FUNC B
TAPE (CON601 PIN18)
TAPE
TUNER
PHONO
AUX
CD
IC602. 603
V-F
V-F MULTIPLEX K-CON OFF
V-F ON
MULTIPLEX ON
K-CON ON
K-CON V-F ON
K-CON MULTIPLEX
H=10V L=0V
WH101
W101 7P-2.5
WH104
PT1 PT-HE
F101 HR:3.15A 250V G;2A 250V
SW101 AC VOLTAGE
AC 26.8
AC16.8
AC5.5V
F102 T5AL 250V
F103 T5AL 250V
PR903 5A 60V
PR904 5A 60V
F AC-2 CON992 C.B
TO PRO/990 C.B CON 103
G PT C.B
HR ONLY
240V
220V
230V
120V
HR:AC120/220~230/240V 50/60HZ
G:AC230-240V 50HZ
BH1202-05 040 -2

SCHEMATIC DIAGRAM-2 (MAIN: EE, K, EEZ, EZ)





IC604

	FUNC A	FUNC B	TAPE (CON601 PIN18)
TAPE	L	L	H
TUNER	L	H	L
PHONO	L	L	L
AUX	H	L	L
CD	H	H	L

IC602, 603

V-F	V-F MULTIPLEX K-CON OFF	V-F ON	MULTIPLEX ON	K-CON ON	K-CON V-F ON	K-CON MULTIPLEX
A	L	L	L	H	H	H
B	H	L	L	H	L	H
C	H	H	L	L	H	L

H=10V L=0V

A MAIN C.B

FROM L RELAY-2 C.B W105 TO PIN351

FROM K RELAY-1 C.B W106 TO PIN301

J801 ANTENNA

LW/MW LOOP

FM 75Ω

VR651 VIDEO/AUX INPUT LEVEL

J652-1 PHONO IN L

J652-2 VIDEO/AUX IN L

J652-3 LINE OUT L

J653-1 PHONO IN R

J653-2 VIDEO/AUX IN R

J653-3 LINE OUT R

TO CON604

FROM CD MECHANISM 4ZG-1 W102

J253 SUPER WOOFER

J254 SPEAKERS SPEAKER IMP:8Ω

BLU 7

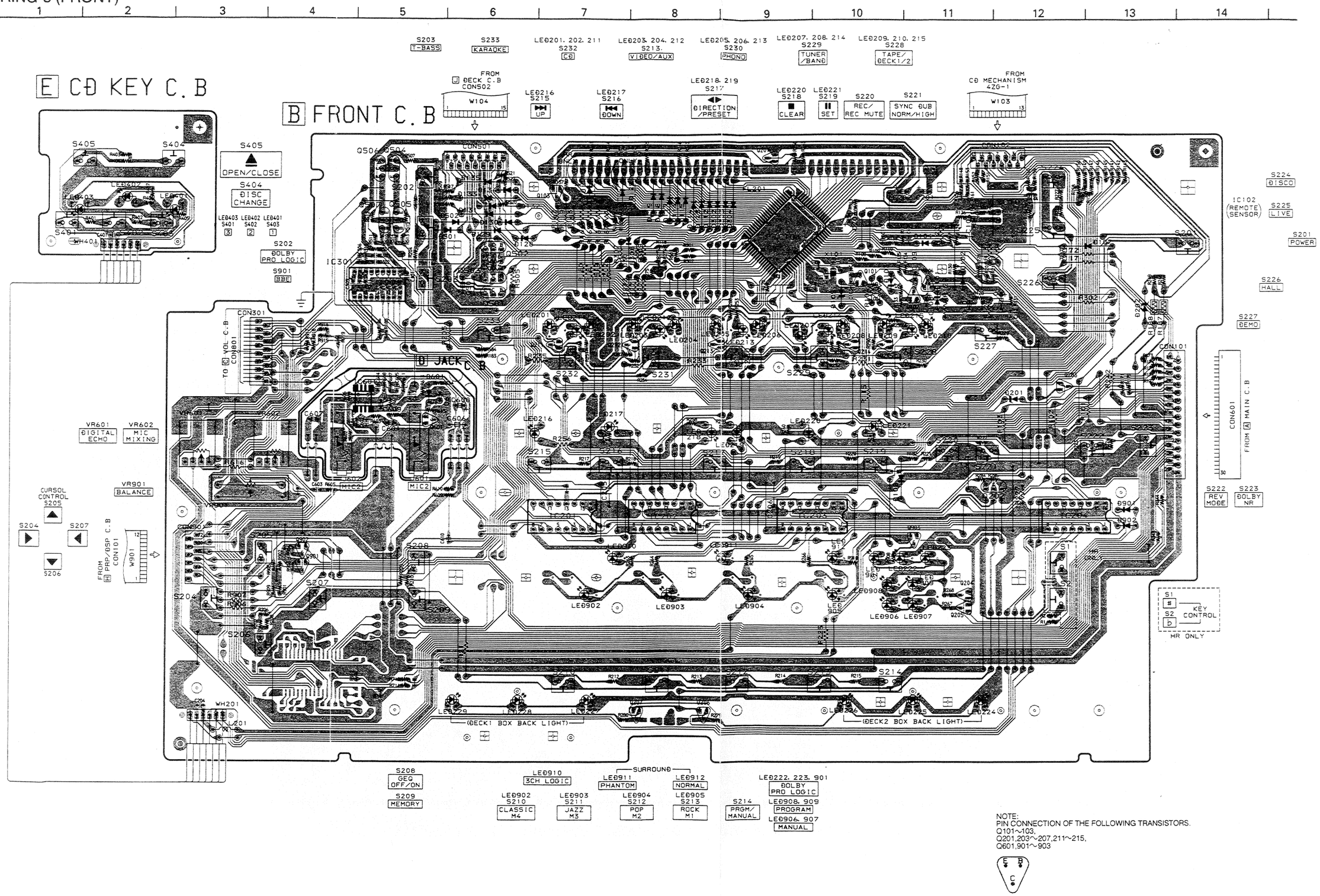
BLU

RED 1

TO F AC-2 C.B WH102

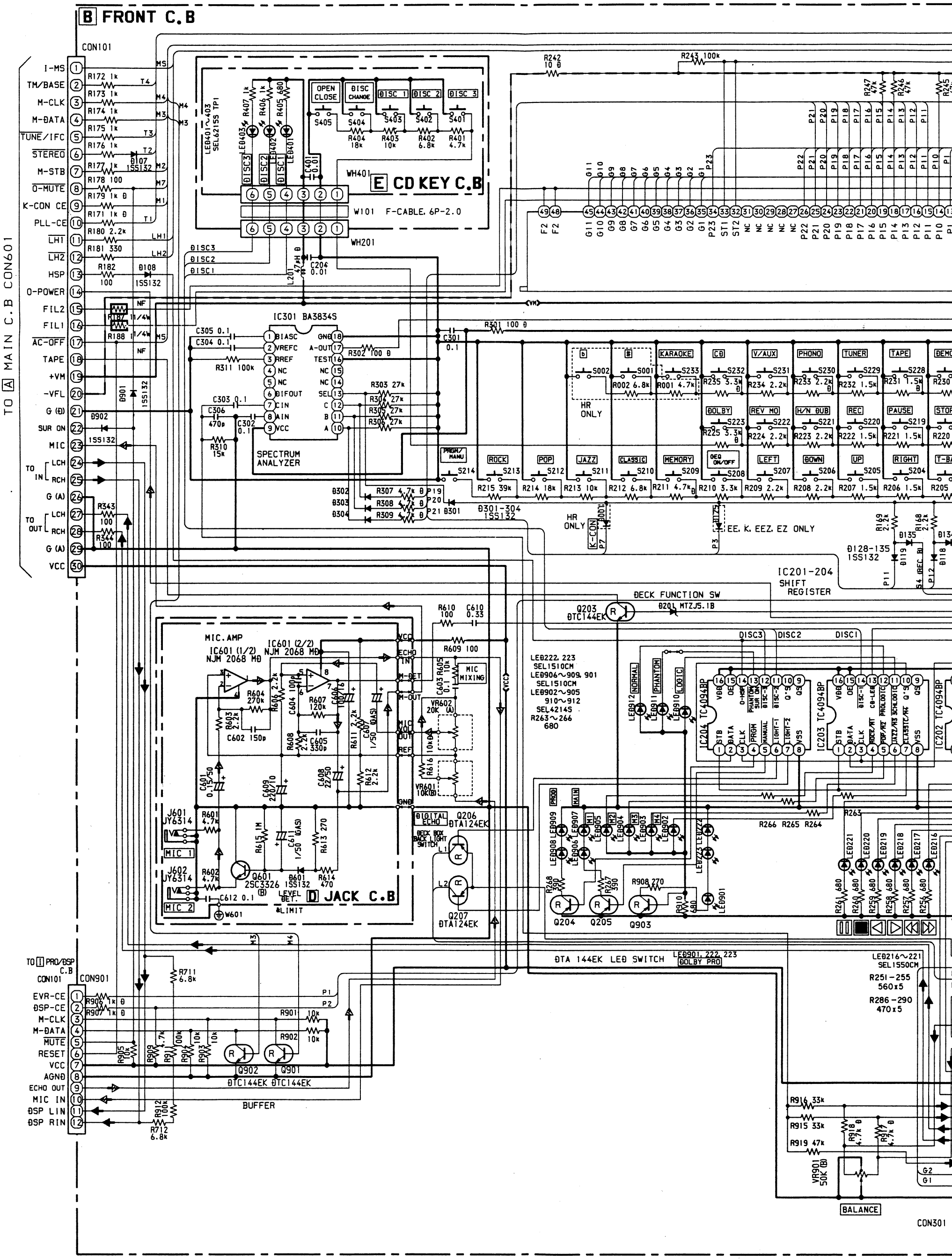
TO B FRONT C.B CON101

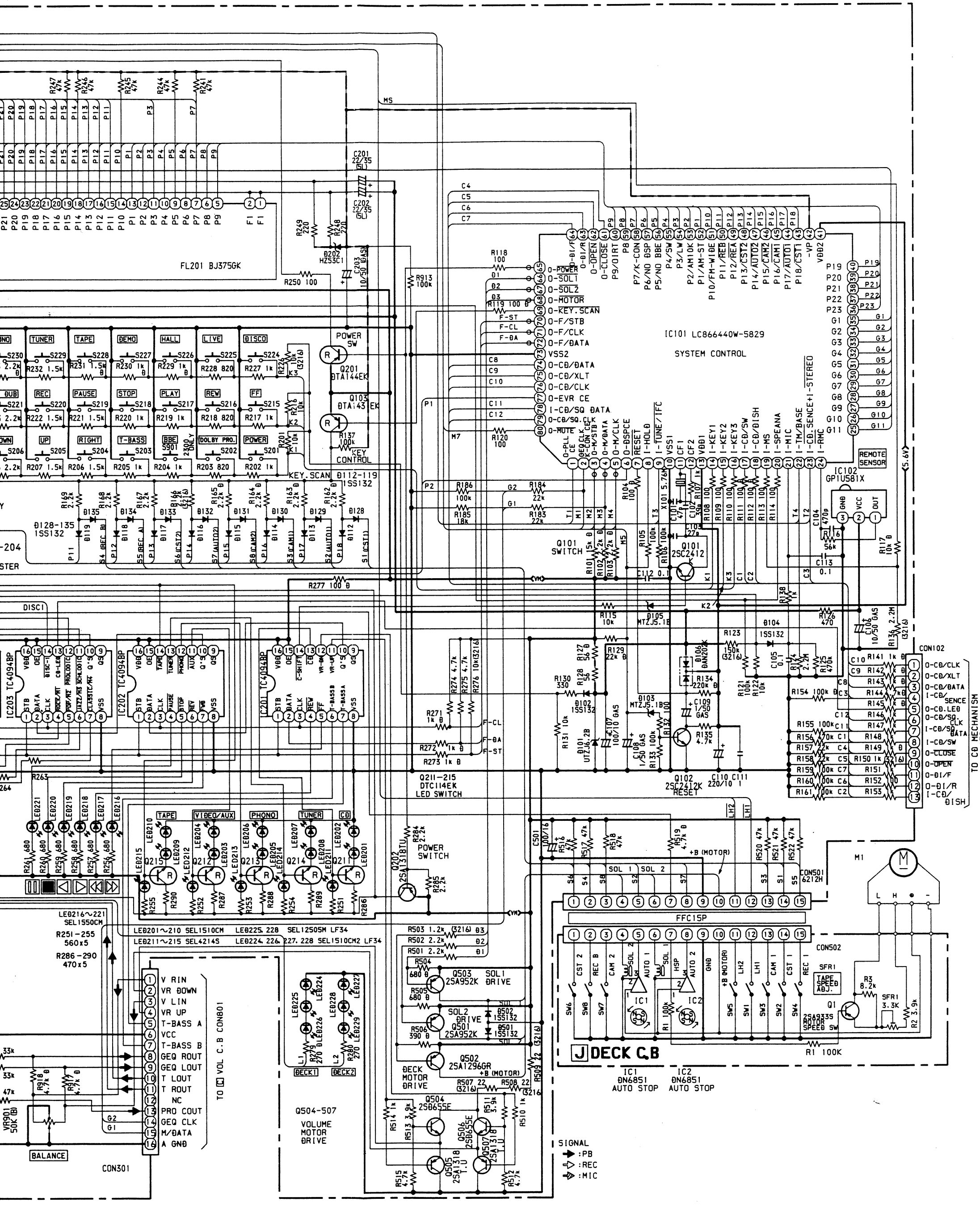
J250 PHONES



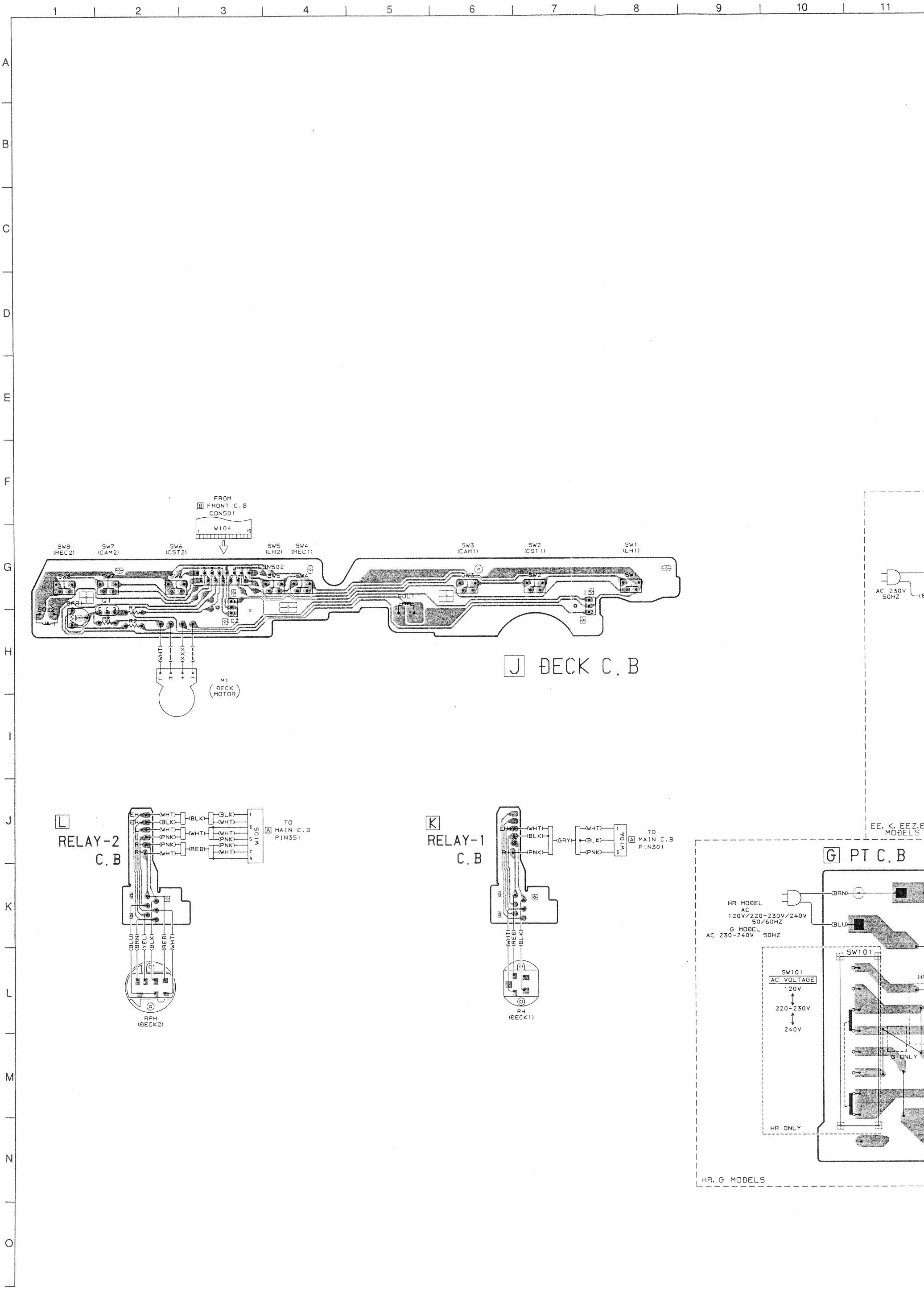
NOTE:
PIN CONNECTION OF THE FOLLOWING TRANSISTORS.
Q101~103,
Q201,203~207,211~215,
Q601,901~903

SCHEMATIC DIAGRAM-3 (FRONT)

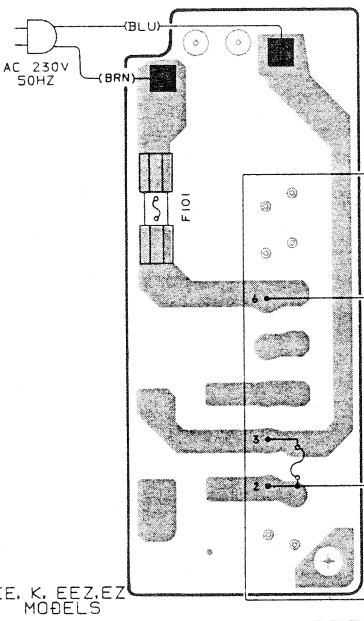



IC101 LC866440W-5829
SYSTEM CONTROL
FL201 BJ375GK
Q101 SWITCH
Q101 2SC2412
IC102 GP1U581X
REMOTE SENSOR
POWER SW
Q201 DTA144EK
Q103 DTA143 EK
KEY CONTROL
KEY.SCAN Ø112-119
1SS132
Q211-215 DTC114EK
LED SWITCH
Q102 2SC2412K
RESET
POWER SWITCH
Q202 2SA1318TU
IC203 TC4094BP
IC202 TC4094BP
IC201 TC4094BP
Q504-507
VOLUME MOTOR DRIVE
Q503 SOL1 DRIVE
SOL2 DRIVE
Q501 2SA952K
Q502 2SA1296GR
DECK MOTOR DRIVE
+B (MOTOR)
IC1 ØN6851 AUTO STOP
IC2 ØN6851 AUTO STOP
J DECK C.B
FFC15P
CON502
CON102
TO CØ MECHANISM 4ZG-1
CON301
TO C VOL C.B CON801
CON501 6212H
SFR1 TAPE SPEED ADJ.
SFR1 3.3K
Q1 2SA933S MOTOR SPEED SW
R1 100K
BALANCE
VR901 50K (B)
SIGNAL
:PB
:REC
:MIC
TAPE
VIDEO/AUX
PHONO
TUNER
CD
DISC1
SEL1550CM
SEL1510CM
SEL12505M LF34
SEL4214S
SEL1510CM2 LF34
SEL12505M
MS
M7
M1
VM
5.6V

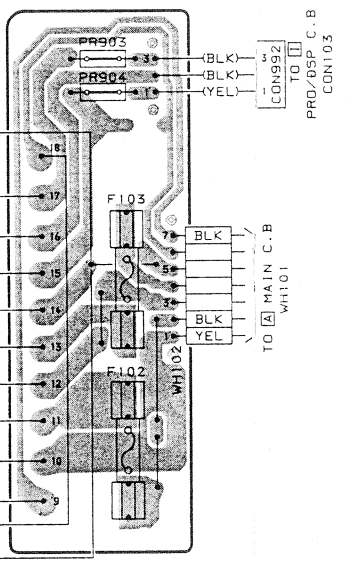
WIRING-4 (DECK／POWER／VOLUME)



H AC-1 C.B

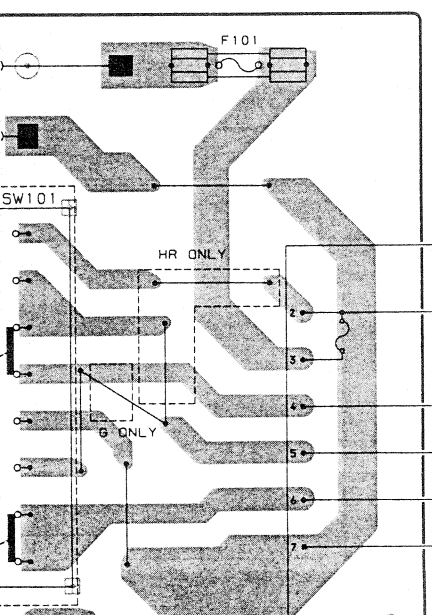


F AC-2 C.B

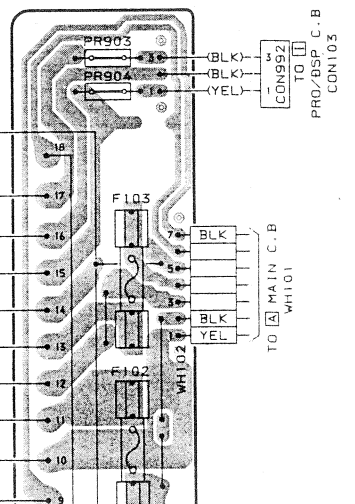


EE, K, EEZ, EZ MODELS

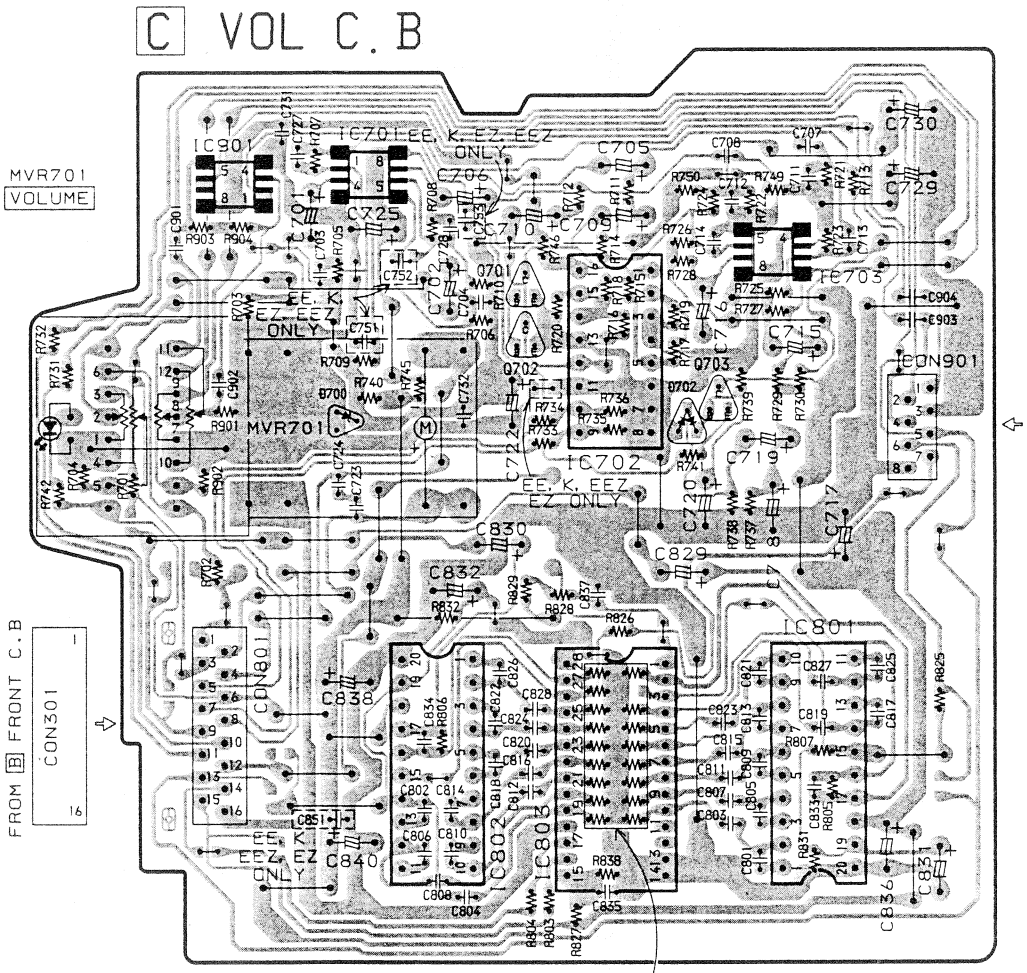
PT C.B



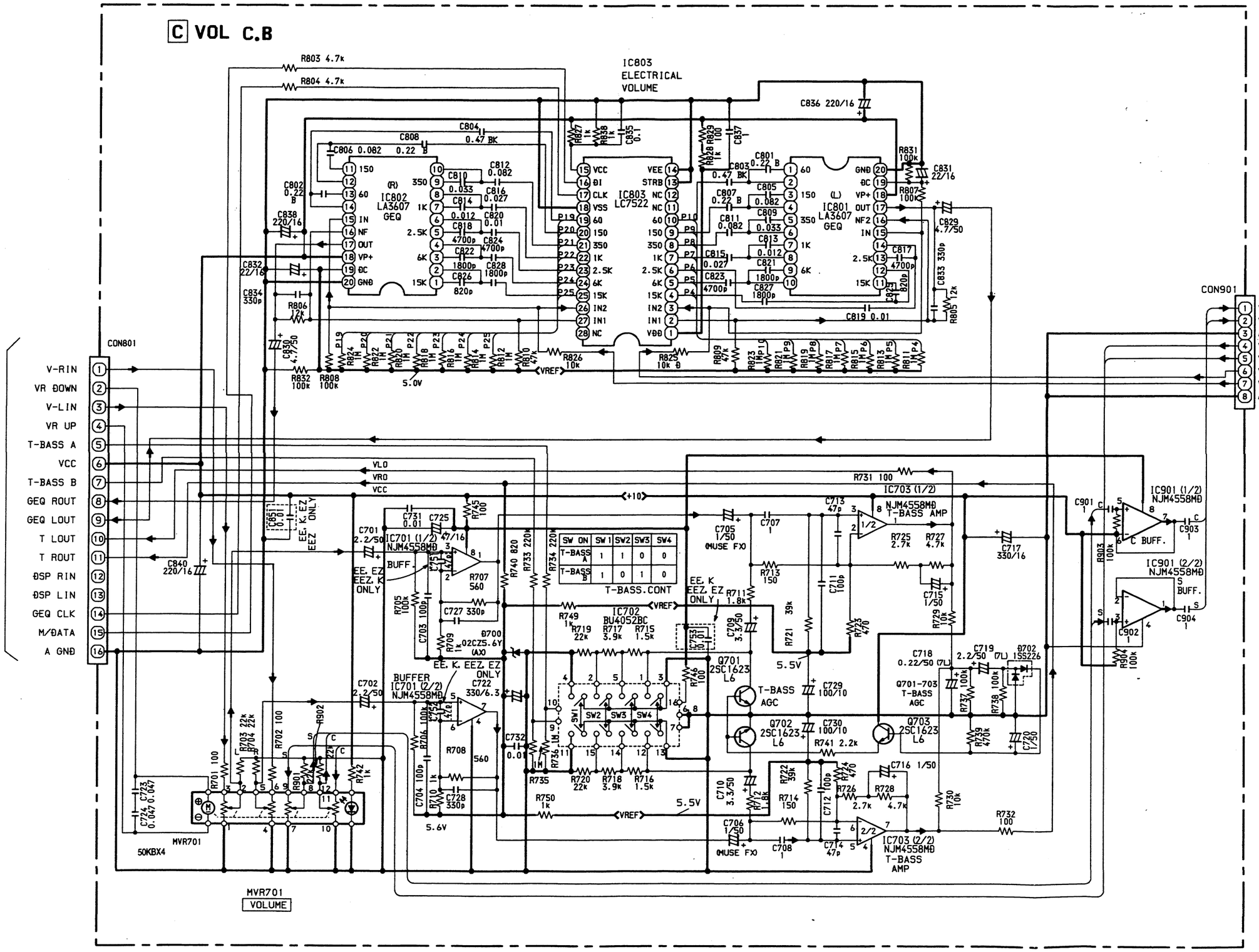
F AC-2 C.B



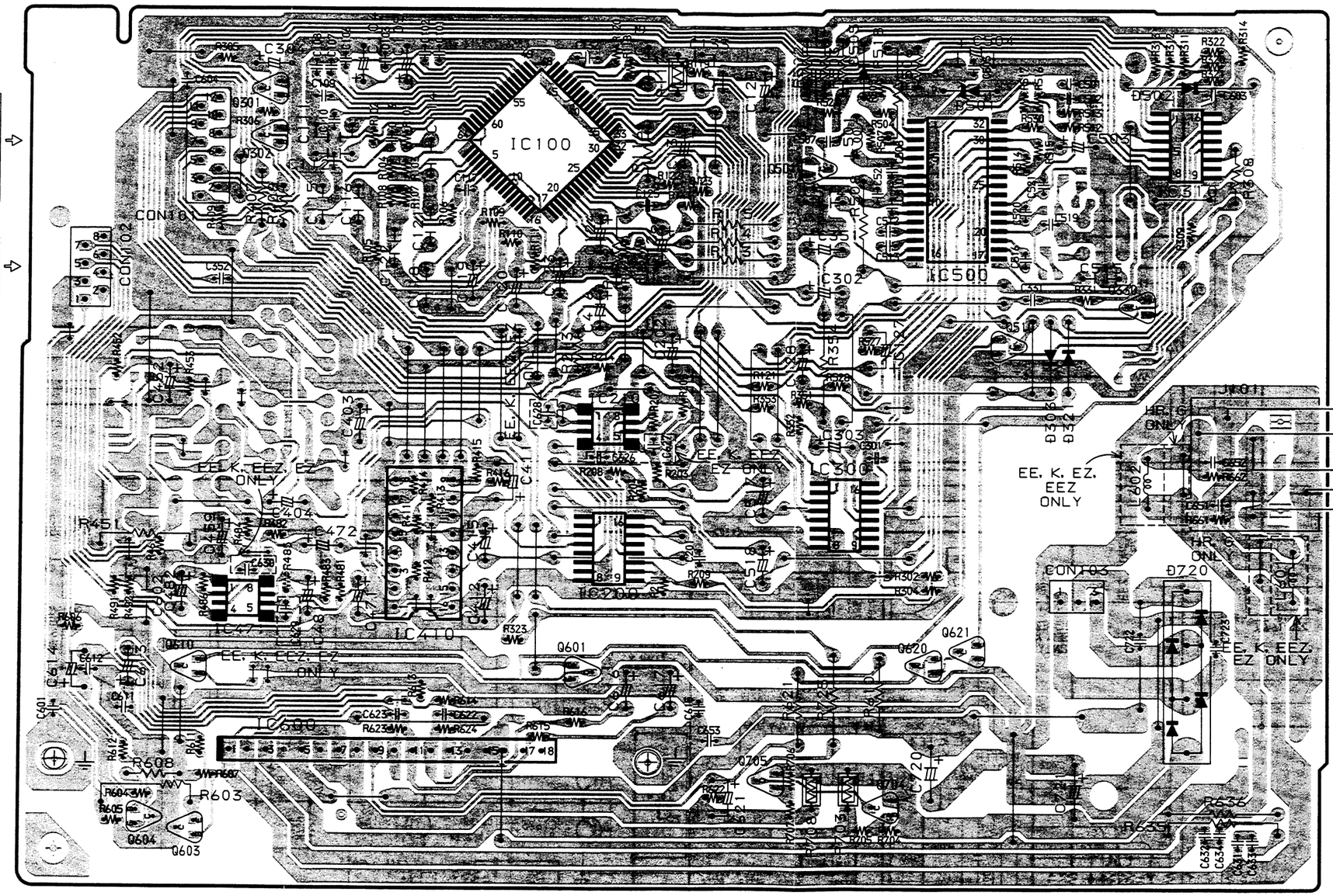
C VOL C.B



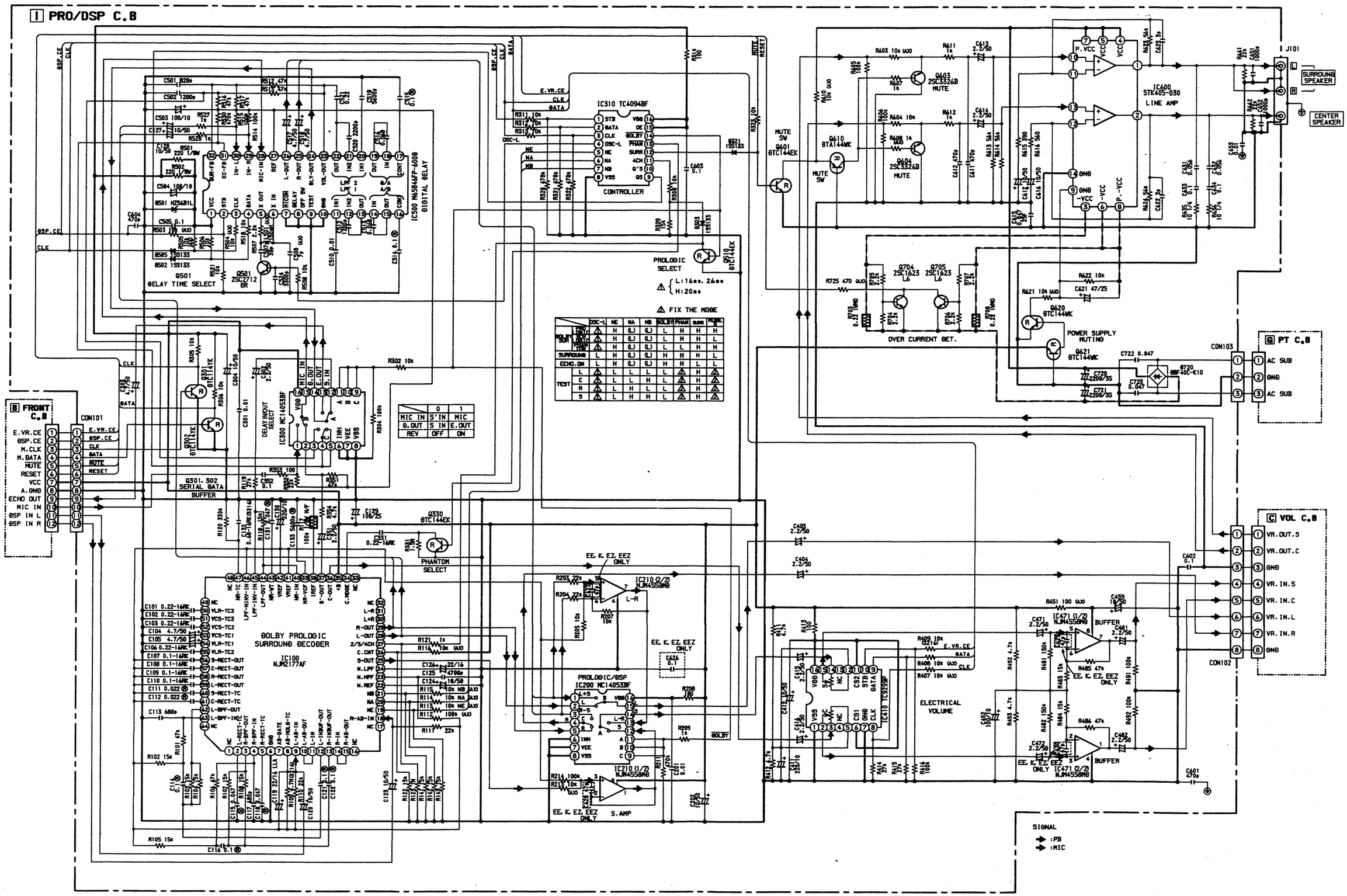
SCHEMATIC DIAGRAM-4 (VOLUME)



I PRO/DSP C.B


FROM
B FRONT C.B
CON901
W901
12
FROM
C VOL C.B
CON901
W901
8
CON101
CON102
IC100
IC500
IC300
IC200
IC410
IC470
IC600
C302
C303
C403
C404
C472
C120
Q601
Q620
Q621
Q605
Q603
Q604
R603
R608
R451
EE, K, EZ
EEZ ONLY
EE, K, EEZ, EZ ONLY
JW01
HR, G, L ONLY
CENTER SPEAKER
SPEAKER IMP : 8Ω
R
SURROUND SPEAKER
L
SPEAKER IMP : 16Ω
CON103
D720
TO CON103
CON992
1 3
FROM F AC-2 C.B

SCHEMATIC DIAGRAM-5 (PRO／DSP)



IC DESCRIPTION

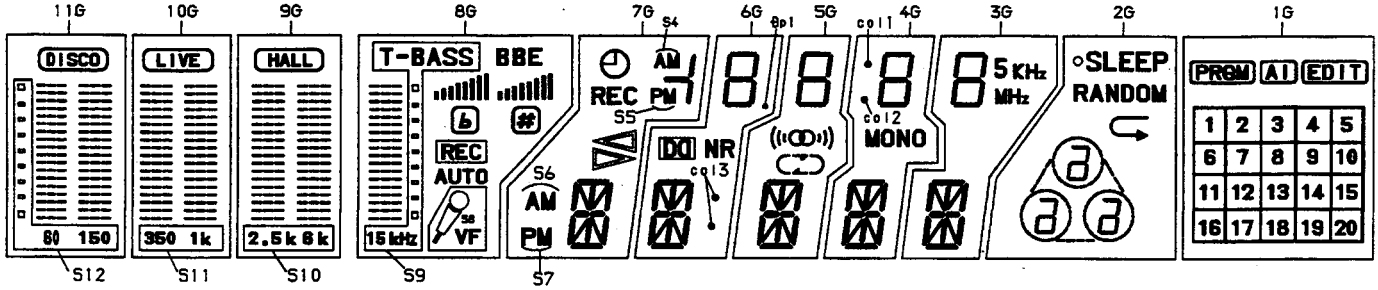
IC, LC866440W-5829

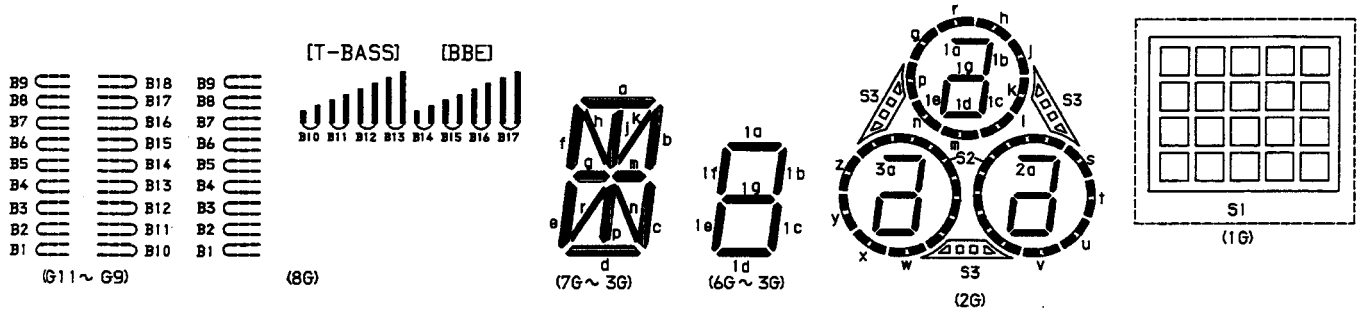
Pin No.	Pin Name	I/O	Description
1	O-PLLCE	O	PLL IC chip enable output.
2	K-CON CE GEQ CLK	O	Key control chip enable, graphic equalizer IC data transfer clock output.
3	O-M/STB	O	Key main shift register, data latch strobe output.
4	O-M/DATA	O	Key main shift register/PLL/DSP related data output.
5	O-M/CLK	O	Key main shift register/PLL/DSP related data transfer clock output.
6	O-DSPCE	O	DSP data latch strobe output.
7	RESET	I	Reset input.
8	I-HOLD	I	Power failure detect input (Hold at 'L') P74 input data is "1" at "L' level.
9	I-TUNE/IFC	I	Tuner SD detection input/IF count serial data input.
10	VSS1	—	GND terminal.
11	CF1	I	Clock terminal (5.76 MHz).
12	CF2	O	Clock terminal (5.76 MHz).
13	VDD1	—	Power supply terminal.
14	I-KEY1	I	Key 1 A/D input.
15	I-KEY2	I	Key 2 A/D input.
16	I-KEY3	I	Key 3 A/D input.
17	I-CD/SW	I	CD mechanism switch A/D input.
18	I-CD/DISH	I	CD turntable photo sensor A/D input.
19	I-MS	I	Deck MS detection A/D input.
20	I-SPEANA	I	Spectrum analyzer level A/D input.
21	I-MIC	I	Mic level A/D input for auto vocal fader.
22	I-TM/BASE	I	DSP data latch strobe output.
23	I-CD SENSE I-STEREO	I	Watch reference clock input (8/50/60 Hz automatic supported).
24	I-RMC	I	System remote control input (active low).
25~35	G11~G1	O	FL grid output (G11~G1).
36	P23	O	FL segment output (P23).
37	P22	O	FL segment output (P22).
38	P21	O	FL segment output (P21)/spectrum analyzer band select output (A).
39	P20	O	FL segment output (P20)/spectrum analyzer band select output (B).
40	P19	O	FL segment output (P19)/spectrum analyzer band select output (C).
41	VDD2	—	Power supply terminal.
42	-VP	—	Power supply for FL display.
43	P18/CSTI	I	FL segment output (P18)/DECK-1 cassette sensed switch input.
44	P17/AUTOI	I	FL segment output (P17)/DECK-1 auto stop input.
45	P16/CAMI	I	FL segment output (P16)/DECK-1 cam switch input.
46	P15/CAM2	I	FL segment output (P15)/DECK-2 cam switch input.
47	P14/AUTO2	I	FL segment output (P14)/DECK-2 auto stop input.
48	P13/CST2	I	FL segment output (P13)/DECK-2 cassette sensed switch input.
49	P12/REA	I	FL segment output (P12)/DECK-2 side-A record OK switch input.
50	P11/REB	I	FL segment output (P11)/DECK-2 side-B record OK switch input.

Pin No.	Pin Name	I/O	Description
51	P10/FM-WIDE	O	FL segment output (P10).
52	P1/AMST	O	FL segment output (P1).
53	P2/AM10K	O	FL segment output (P2).
54	P3/LW	O	FL segment output (P3).
55	P4/SW	O	FL segment output (P4).
56	P5/NO-BBE	O	FL segment output (P5).
57	P6/NO-DSP	O	FL segment output (P6).
58	P7/KCON	O	FL segment output (P7).
59	P8	O	FL segment output (P8).
60	P9/OIRT	O	FL segment output (P9).
61	O-CLOSE	O	CD tray close output.
62	O-OPEN	O	CD tray open output.
63	DI/R	O	CD turntable reverse rotation output.
64	DI/F	O	CD turntable forward rotation output.
65	O-POWER	O	System power ON /OFF output.
66	O-SOL1	O	Deck-1 plunger ON /OFF output.
67	O-SOL2	O	Deck-2 plunger ON /OFF output.
68	O-MOTOR	O	Deck motor ON /OFF output.
69	O-KEY. SCAN	O	Segment input enable output (low active).
70	O-F/STB	O	Front shift register data latch strobe output.
71	O-F/CLK	O	Front shift register data transfer clock output.
72	O-F/DATA	O	Front shift register data output.
73	VSS2	—	GND terminal.
74	O-CD/DATA	O	CD IC control data output.
75	O-CD/XLT	O	CD IC control data latch output.
76	O-CD/CLK	O	CD IC control data transfer clock output.
77	O-EVR CE	O	Electronic VR data latch strobe output.
78	I-CD/SQ DATA	I	CD SUB-Q data input.
79	O-CD/SQ CLK	O	Clock output for CD SUB-Q data input.
80	O-MUTE	O	System mute ON /OFF output.

FL (BJ375GK) GRID ASSIGNMENT／ANODE CONNECTION

GRID ASSIGNMENT

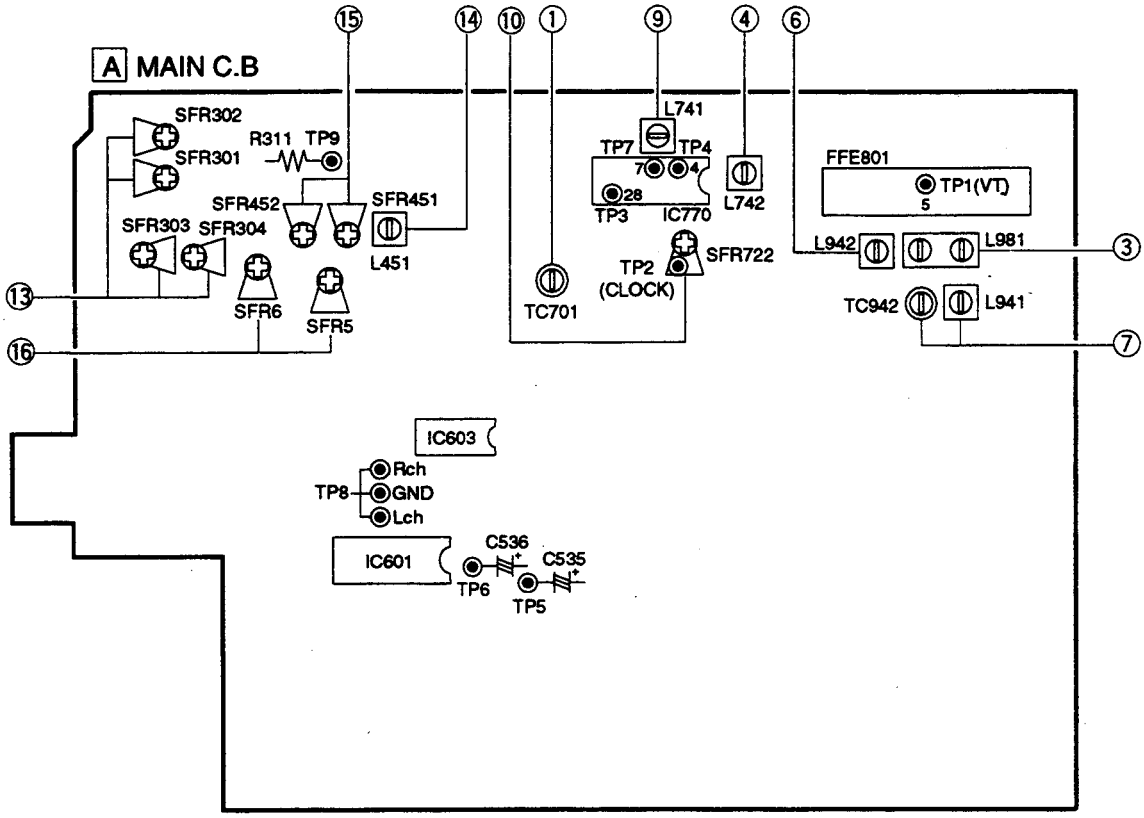


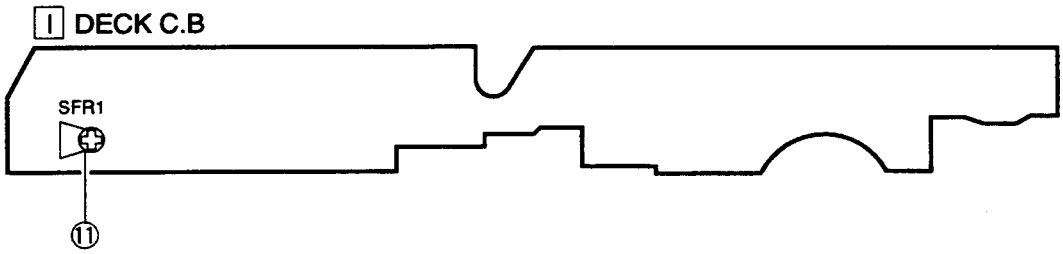


ANODE CONNECTION

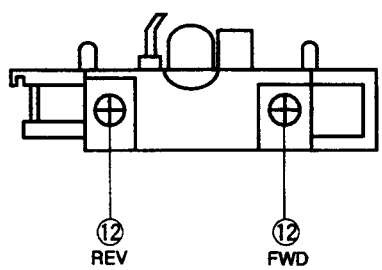
	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B10	B10	B10	b #	d	d	d	d	d	s, $t_{w, x}$	**20**
P2	B1	B1	B1	B1	j, p	j, p	j, p	j, p	j, p	u, $v_{y, z}$	**19**
P3	B11	B11	B11	S8	n	n	n	n	n	3e	**18**
P4	B2	B2	B2	B2	r	r	r	r	r	3c	**17**
P5	B12	B12	B12	(b)	c	c	c	c	c	3a,3d,3g	**16**
P6	B3	B3	B3	B3	e	e	e	e	e	3b	**15**
P7	B13	B13	B13	(#)	m	m	m	m	m	2e	**14**
P8	B4	B4	B4	B4	g	g	g	g	g	2c	**13**
P9	B5	B5	B5	B5	f	f	f	f	f	2a,2d,2g	**11**
P10	B15	B15	B15	**AUTO**	b	b	b	b	b	S3	**10**
P11	B6	B6	B6	B6	k	k	k	k	k	j, m, q	**9**
P12	B16	B16	B16	B10	h	h	h	h	h	h, l, p	**8**
P13	B7	B7	B7	B7	a	a	a	a	a	k, n, r	**7**
P14	B14	B14	B14	REC	S7	col3	☾	col1	**kHz**	2b	**12**
P15	B17	B17	B17	B11	S6	DO NR	((◎))	**MONO**	**5**	1e	**6**
P16	B8	B8	B8	B8	▷	Dp1	☽	col2	**MHz**	1a,1d,1g	**5**
P17	B18	B18	B18	B12	◁	1d	1d	1d	1d	1c	**4**
P18	B9	B9	B9	B9	**REC**	1e	1e	1e	1e	1b	**3**
P19	▭	▭	▭	B13	S5	1c	1c	1c	1c	○	**2**
P20	—	—	—	B14	▬	1g	1g	1g	1g	S2	**1**
P21	—	—	—	B15	/	1f	1f	1f	1f	↪	EDIT
P22	—	—	—	B16	◷	1b	1b	1b	1b	**SLEEP**	AI
P23	**DISCO**	**LIVE**	**HALL**	B17	S4	1a	1a	1a	1a	**RANDOM**	PRGM
P24	S12	S11	S10	S9	—	—	▲▼	—	—	—	S1
P25	—	—	—	**BBE**	—	—	—	—	—	—	—

ELECTRICAL ADJUSTMENT





DECK1 P DECK 2 R/P/E HEAD



<TUNER SECTION>

1. Clock Frequency Adjustment

Settings: · Test point : TP2

· Adjustment location : TC701

Method: Set to MW 1602kHz and adjust TC701 so that the test point becomes 2052kHz±0.01kHz.

2. MW VT Check

Setting: · Test point : TP1

Method: Set to MW 1602kHz and check that the test point is 6.8V±1.0V.

3. MW Tracking Adjustment

Settings: · Test point : TP5(Lch), TP6(Rch)

· Adjustment location : L981

Method: Set to MW 999kHz and adjust L981 that the test point becomes maximum.

4. AM IF Adjustment

Setting: · Test point : TP5(Lch), TP6(Rch)

L742 ..... 450kHz

5. FM VT Check

Setting: · Test point : TP1

Method: (HR,G MODELS)

Set to FM 87.5MHz and check that the test point is more than 1.0V. Then set to FM 108MHz and check that the test point is less than 8.0V.

Method: (EE,K,EEZ,EZ MODELS)

Set to FM 87.5MHz and check that the test point is more than 1.5V. Then set to FM 108MHz and check that the test point is less than 8.2V.

6. LW VT Adjustment(EE,K,EEZ,EZ ONLY)

Settings: · Test point : TP1

· Adjustment location : L942

Method: Set to LW 144kHz and adjust L942 that the test point becomes 1.50V±0.05V.

7. LW Tracking Adjustment(EE,K,EEZ,EZ ONLY)

Settings: · Test point : TP5(Lch), TP6(Rch)

· Adjustment location :

L941 ..... 144kHz

TC942 ..... 290kHz

Method: Set up TC942 to center before adjustment. The level at 144kHz is adjsuted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

8. FM Tracking Check

Setting: · Test point : TP5(Lch), TP6(Rch)

Method: Check that the test point is 2±6dB and distortion is less than 3% at FM98.0MHz.

9. DC Balance/MONO Distortion Adjustment

Settings: · Test point :TP3,TP4 (DC Balance)

TP5(Lch), TP6(Rch) (Distortion)

· Adjustment location : L741

· Input level : 54dB

Method: Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V±0.04V. Next check that the distortion is less than 1.3%.

10.Auto Stop Level Adjustment

Settings: · Test point :TP7

· Adjustment location : SFR722

· Input level : 16dB

Method: Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage hgih(about 7.0V) out by 2dB down.

<TAPE SECTION>

11.Tape Speed Adjustment (DECK2)

Settings: · Test tape : TTA-100
· Test point : TP8
· Adjustment location : SFR1

Method:Play back the test tape, adjust SFR1 for 3000Hz±5Hz.

12.Azimuth Adjustment (DECK1, DECK2)

Settings: · Test tape : TTA-300
· Test point : TP8
· Adjustment location : Head azimuth adjustment screw

Method: Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximam.

13.PB Sensitivity Adjustment (DECK1, DECK2)

Settings: · Test tape : TTA-200
· Test point : TP8
· Adjustment location : (DECK1)
SFR301 (Lch)
SFR302 (Rch)
(DECK2)
SFR303 (Lch)
SFR304 (Rch)

Method: Play back the test tape and adjust so that the output becomes 300mV.

14.Bias Frequency Adjustment (DECK2)

Settings: · Test tape : TTA-602
· Test point : TP9
· Adjustment location : L451

Method: Set to DECK2 to the record mode and adjust L451 so that the frequency at TP9 is 85.0kHz±0.1kHz.

15.REC/PB Frequency Response Adjustment (DECK2)

Settings: · Test tape : TTA-602
· Test point : TP8
· Input signal : 1kHz/10kHz (AUX IN/AUX Vol. MAX)
· Adjustment location : SFR451 (Lch)
SFR452 (Rch)

Method: Apply a 1kHz signal and adjust attenuator so that the level at the test point is 210mV.
Record and play back the 1kHz and 10kHz signal and adjust so that the output level of 10kHz signal is 0dB±0.5dB for 1kHz signal.

16.REC/PB Sensitivity Adjustment (DECK2)

Settings: · Test tape : TTA-602
· Test point : TP8
· Input signal : 1kHz/10kHz (AUX IN/AUX Vol. MAX)
· Adjustment location : SFR5 (Lch)
SFR6 (Rch)

Method: Apply a 1kHz signal and adjust attenuator so that the level at the test point is 21mV.
Record and play back the 1kHz and 10kHz signal and adjust so that the output level is 21mV±0.5dB.

PRACTICAL SERVICE FIGURE

TUNER SECTION

<FM SECTION> (HR,G)

IHF Sensitivity:	3dB±6dB
(THD 3%)	(87.5 / 98.0 / 108.0MHz)
S/N 50dB Quieting sensitivity:	
	31dB±5dB
	(87.5 / 98.0 / 108.0MHz)
Signal to noise ratio:	More than 64dB(98.0MHz)
Distortion:	Less than 1.2%(98.0MHz)
Stereo separation:	More than 25dB(98.0MHz)
Intermediate frequency:	10.7MHz

<FM SECTION> (K,EE,EEZ,EZ)

IHF Sensitivity:	6dB±6dB
(THD 3%)	(87.5 / 98.0 / 108.0MHz)
S/N 50dB Quieting sensitivity (K,EE ONLY):	
	31dB±5dB
	(87.5 / 98.0 / 108.0MHz)
S/N 46dB Quieting sensitivity (EEZ,EZ ONLY):	
	31dB±5dB
	(87.5 / 98.0 / 108.0MHz)
Signal to noise ratio:	More than 64dB(98.0MHz)
Distortion:	Less than 1.2%(98.0MHz)
Stereo separation:	More than 22dB(98.0MHz)
Intermediate frequency:	10.7MHz

<MW SECTION>

Sensitivity:	54dB+8,-6dB(603kHz)
(S/N 20dB)	53dB±6dB(999kHz)
	53dB±6dB(1404kHz)
Distortion:	Less than 1.5%(999kHz)
Stereo separation:	More than 12dB(999kHz)
Intermediate frequency:	450kHz

<LW SECTION> (K,EE,EEZ,EZ)

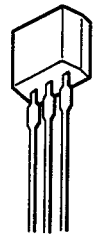
Sensitivity:	66dB±5dB(144kHz)
(S/N 20dB)	63dB±5dB(198kHz)
	62dB±5dB(290kHz)
Distortion:	Less than 1.5%(198kHz)
Intermediate frequency:	450kHz

TAPE SECTION

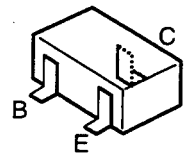
Tape speed:	3000Hz±1.5%
Wow & flutter:	Less than 0.4%(RMS)
Take-up torque:	40～45g-cm(FWD, REV)
F.F torque:	75～180g-cm
Rew torque:	75～180g-cm
Back tension:	2.0～7.0g-cm
PB Output level:	2.8V±1.5dB(SP OUT)
REC / PB Output level:	1.5V±2.0dB(TP6)
Distortion(REC / PB):	Less than 2.0%(NORM,CrO_2)
Nois level(REC / PB):	Less than 8mV/15mV
	(DOLBY B NR ON/OFF
	NORM, SP OUT,Vol 2V)
	Less than 7mV/12mV
	(DOLBY B NR ON/OFF
	CrO_2, SP OUT,Vol 2V)
Crosstalk:	More then 60dB(1kHz, 0VU)
Erasing ratio:	More then 60dB(125Hz)
Channel separation:	More then 40dB(1kHz, 0VU)
REC bias frequency:	85kHz
Test tape:	NORMAL TTA-601 / 600
	CrO_2 TTA-200
	METAL TTA-630

TRANSISTOR ILLUSTRATION

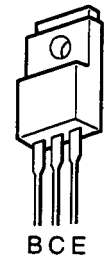
2SA935 2SC3266
2SA952 2SC3331
2SA1296 2SD655
2SA1318 KTC3198
2SC2240



2SA933S
DTA114YS



2SA1162 DTA143EK
2SC1623 DTA144EK
2SC2412 DTA144WK
2SC2712 DTC114EK
2SC2714 DTC114YK
2SC3326 DTC144EK
2SC3722K DTC144WK



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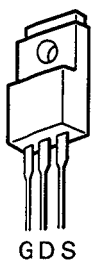
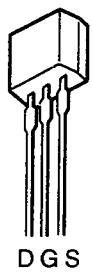


2SJ176
2SK1094



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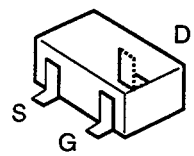
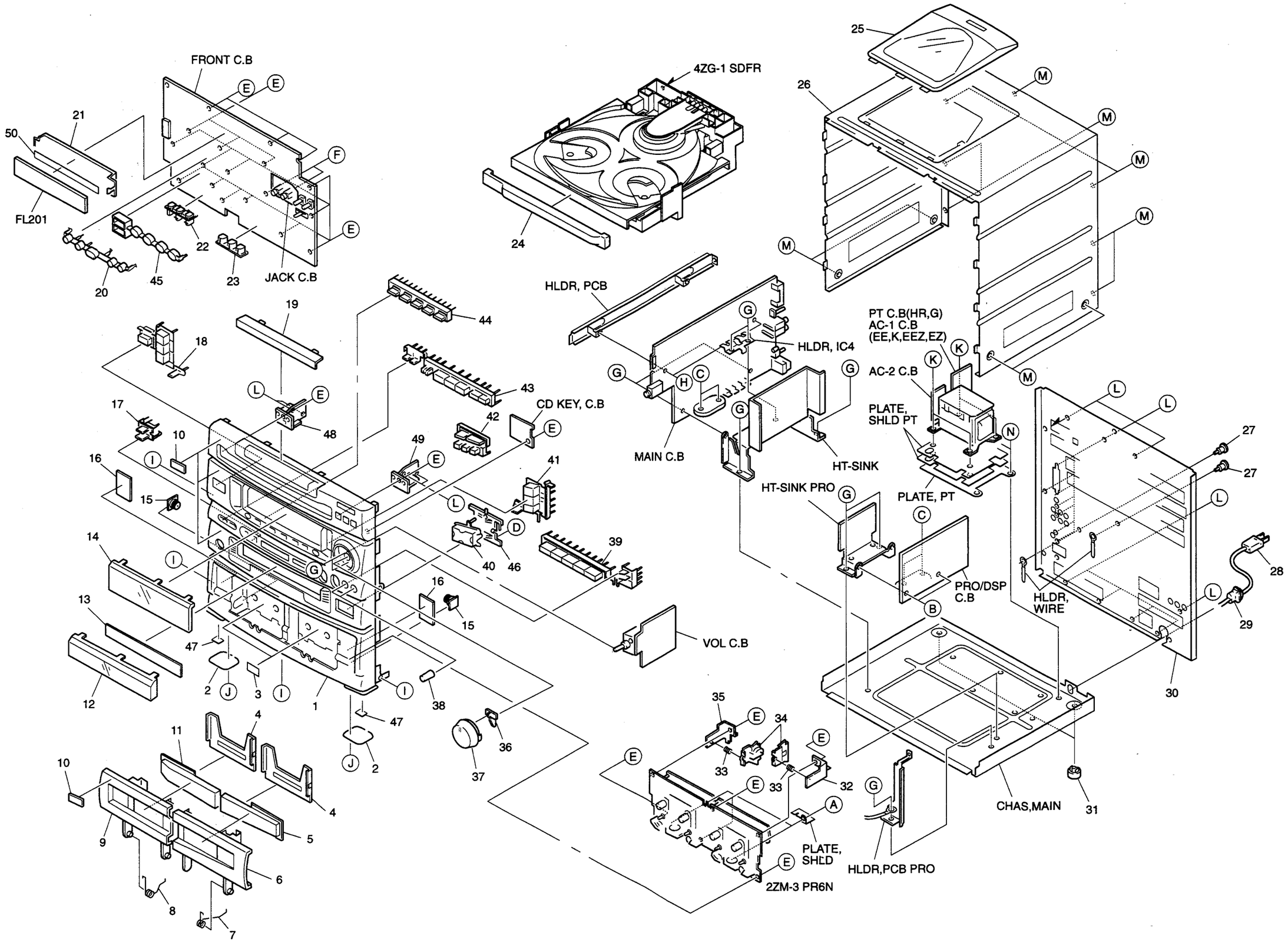


2SK543

MECHANICAL EXPLODED VIEW 1/1

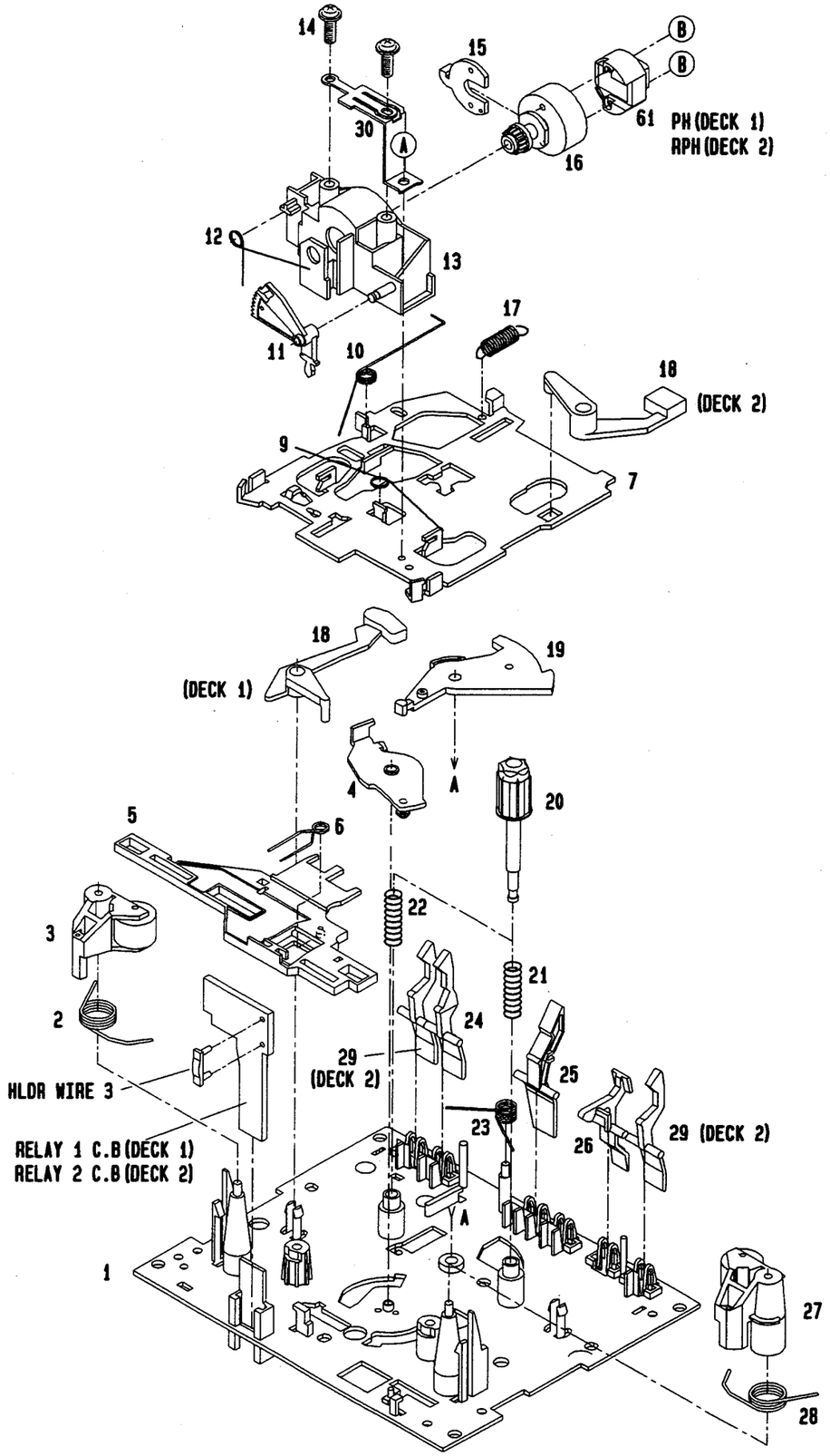


MECHANICAL PARTS LIST 1／1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	85-MA1-003-119		CAB,FR E<EXCEPT HR>
1	85-MA1-002-119		CAB,FR H2<HR>
2	84-VM5-013-010		RING,FOOT
3	81-532-080-019		LBL,CASS-COMPT
4	85-NF5-026-019		IND,CASS
5	85-MA2-030-019		WINDOW,DECK R
6	85-MA2-015-119		BOX,CASS R<HR>
6	85-MA1-017-119		BOX,CASS R(E)<EXCEPT HR>
7	82-NF5-219-019		SPR-T,EJECT 2 (SIN)
8	82-NF5-218-019		SPR-T,EJECT 1 (SIN)
9	85-MA2-014-119		BOX,CASS L<HR>
9	85-MA1-016-119		BOX,CASS L(E)<EXCEPT HR>
10	82-NE8-032-019		BADGE AIWA 27.5
11	85-MA2-029-019		WINDOW,DECK L
12	85-MA2-042-019		WINDOW,GEQ 2
13	85-MA1-019-019		PLATE,GEQ PL
14	85-MA1-021-019		WINDOW,AMP 1
15	87-063-165-019		OIL-DMPR 150
16	80-MK2-206-010		DMPR 27-44.5-3
17	85-MA1-020-019		KEY,CONTROL<HR>
18	85-MA2-018-019		KEY,POWER
19	85-MA2-026-019		WINDOW,CD
20	85-MA2-205-019		GUIDE,PLAY
21	82-NF5-212-019		GUIDE FL
22	85-NF5-210-119		GUIDE,LED L
23	85-NF5-211-119		GUIDE,LED R
24	85-MA2-032-019		PANEL,TRAY<HR>
24	85-MA1-018-019		PANEL,TRAY(E)<EXCEPT HR>
25	85-NF5-031-119		WINDOW,TOP
26	85-MA2-043-019		CAB,STEEL(S)
27	87-084-077-019		NYLON RIVET DIA 3.5 - 4.5
⚠ 28	87-050-100-019		AC CORD ASSY K3P<K>
⚠ 28	87-050-081-019		AC CORD ASSY,G<G>
⚠ 28	87-050-079-019		AC-CORD ASSY,E<EXCEPT K,G>
29	87-085-185-010		BUSHING,AC CORD E
30	85-MA1-009-019		PANEL,REAR EEBNM<EE>
30	85-MA1-027-019		PANEL,REAR EZBN<EEZ,EZ>
30	85-MA1-029-019		PANEL,REAR GBN<G>
30	85-MA1-008-019		PANEL,REAR HRJBNM<HR>
30	85-MA1-028-019		PANEL,REAR KBN<K>
31	87-085-224-010		FOOT,H17
32	82-NF5-227-019		HLDR,LOCK 2N
33	82-NF5-228-019		SPR-C,LOCK
34	82-NF5-229-019		PLATE,LOCK
35	82-NF5-226-019		HLDR LOCK 1N
36	84-MA1-051-019		IND,VOL
37	84-MA1-049-019		KNOB,VOL
38	81-MX4-019-019		KNOB,MIC
39	85-MA2-022-019		KEY,GEQ
40	85-MA2-023-019		KEY,CURSOR
41	85-MA1-014-019		KEY,T-BASS
42	85-MA2-017-019		KEY,DIRECT
43	85-MA2-021-019		KEY,PLAY
44	85-MA2-035-019		KEY ASSY,FUN
45	85-MA1-201-019		GUIDE,GEQ
46	85-MA2-203-019		HLDR,CURSOR
47	83-MA1-203-019		FELT,15-20-2 LEG
48	85-MA2-201-019		HLDR,CD L
49	85-MA2-202-019		HLDR,CD R
50	85-MA2-211-019		CLOTH,13-140
A	87-571-032-419		VIT+2-3
B	87-067-633-019		BVT2+3-8 W/CONVEX
C	87-067-581-019		BVT2+3-15 W/O SLOT
D	87-067-945-119		VFT2+3-12(F10)
E	87-078-060-019		BVIT.3PB+3-10
F	81-MK1-210-019		S-SCREW BFT2+3-16
G	87-067-579-019		BVT 2+3-8 W/O SLOT
H	87-078-084-019		BVTT+3-6 W,CONVEX
I	87-591-095-419		QIT+3-8
J	87-067-688-019		BVTT +3-6
K	87-078-191-019		S-SCRW,IT+4-10
L	87-067-761-019		BVT2+3-10 BLK
M	87-067-641-019		UTT2+3-8 W/O SLOT BLK
N	87-067-586-019		BVTT +4-8

TAPE MECHANISM EXPLODED VIEW 1/1



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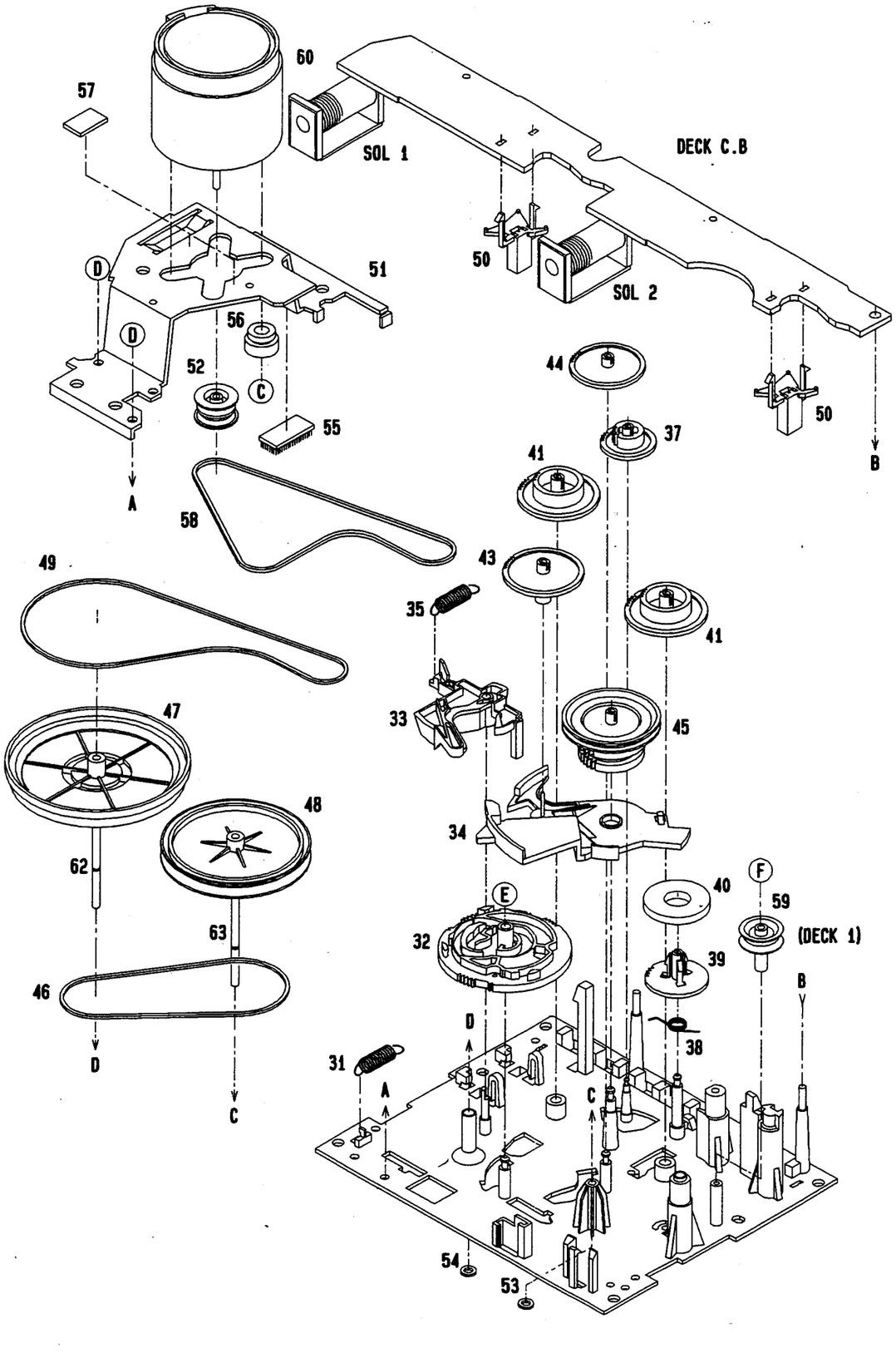

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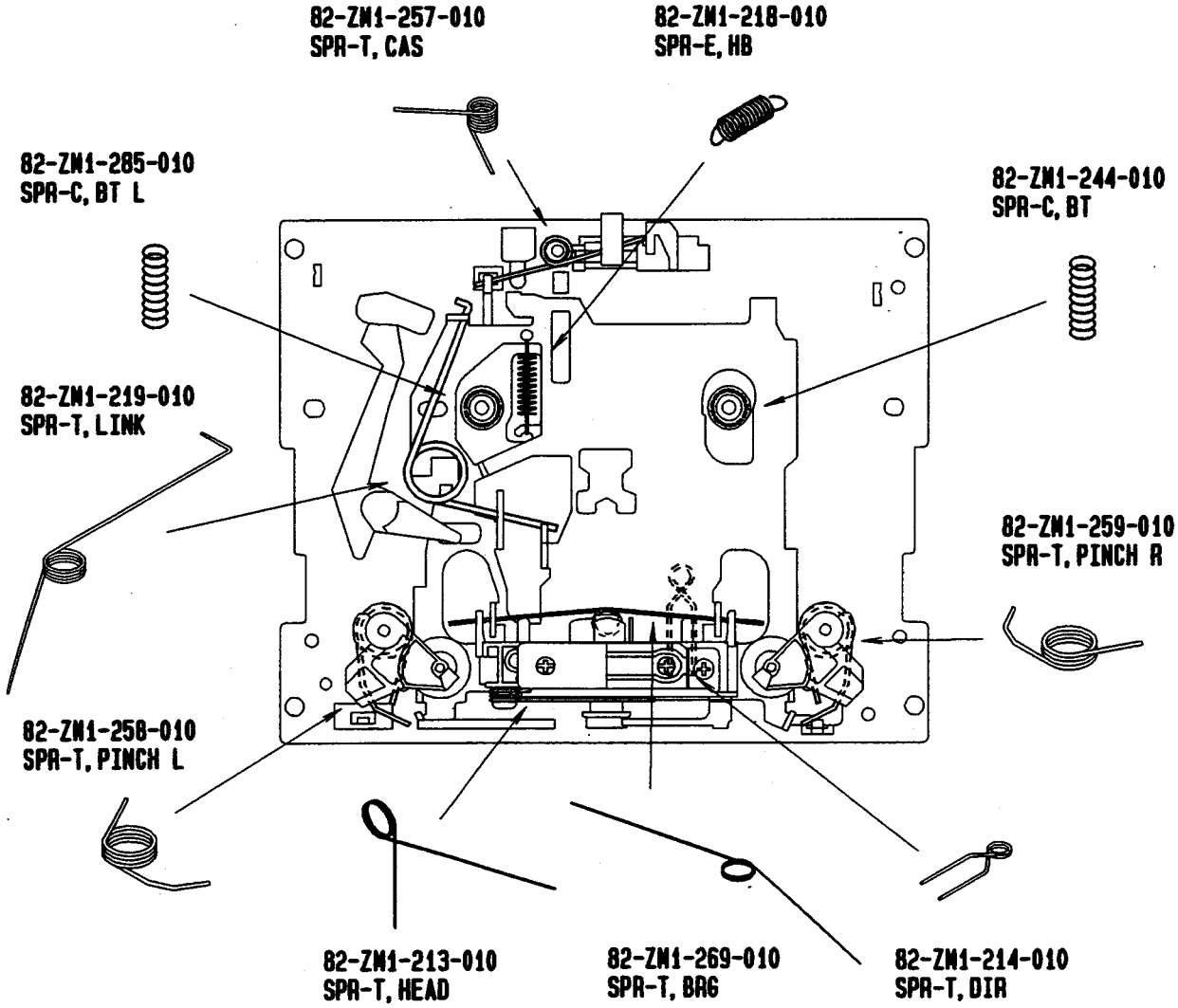
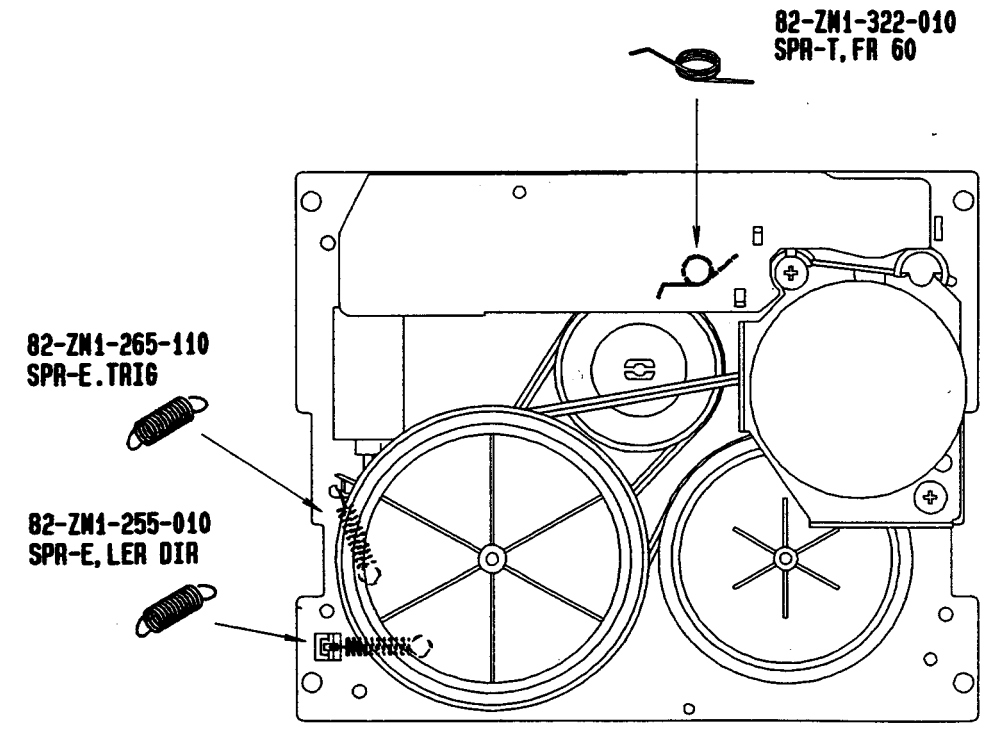
TAPE MECHANISM PARTS LIST 1／1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	82-ZM3-214-110		CHAS ASSY, P (DECK 1)
1	82-ZM1-299-010		CHAS ASSY, R (DECK 2)
2	82-ZM1-258-010		SPR-T, PINCH L
3	82-ZM1-248-110		LVR ASSY, PINCH L
4	82-ZM1-295-210		PLATE ASSY, LINK
5	82-ZM1-266-010		LVR, DIR
6	82-ZM1-214-010		SPR-T, DIR
7	82-ZM1-206-210		CHAS, HEAD
9	82-ZM1-269-010		SPR-T, BRG
10	82-ZM1-219-010		SPR-T, LINK
11	82-ZM1-210-010		GEAR, H T
12	82-ZM1-213-010		SPR-T, HEAD
13	82-ZM1-207-010		GUIDE, TAPE
14	82-ZM1-283-210		S-SCREW, AZIMUTH
15	82-ZM1-314-110		PLATE, HEAD
16	82-ZM1-208-010		HLDR, HEAD
17	82-ZM1-218-010		SPR-E, HB
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)
19	82-ZM1-222-010		LVR, PLAY
20	82-ZM1-217-110		REEL TABLE
21	82-ZM1-244-110		SPR-C, BT
22	82-ZM1-285-110		SPR-C, BT L
23	82-ZM1-257-010		SPR-T, CAS
24	82-ZM1-241-110		LVR, MC
25	82-ZM1-242-010		LVR, CAS
26	82-ZM1-243-010		LVR, STOP
27	82-ZM1-253-110		LVR ASSY, PINCH R
28	82-ZM1-259-010		SPR-T, PINCH R
29	82-ZM1-240-110		LVR, REC (DECK 2)
30	82-ZM1-298-010		SPR-P, EARTH
31	82-ZM1-255-110		SPR-E, LVR DIR
32	82-ZM1-221-110		GEAR, CAM
33	82-ZM1-227-110		LVR, TRIG
34	82-ZM1-224-110		LVR, FR
35	82-ZM1-265-110		SPR-E, TRIG
37	82-ZM1-223-010		GEAR, PLAY
38	82-ZM1-322-019		SPR-T, FR60
39	82-ZM1-220-210		GEAR, IDLER
40	82-ZM1-316-010		RING MAGNET 3
41	82-ZM1-216-210		GEAR, REEL
43	82-ZM1-225-010		GEAR, FR
44	82-ZM1-226-010		GEAR, REW
45	82-ZM1-228-210		SLIP DISK ASSY
46	82-ZM1-328-010		BELT FR2
47	82-ZM1-238-610		FLY-WHL ASSY, R (DECK 2)
47	82-ZM3-210-510		FLY-WHL ASSY, R2 (DECK 1)
48	82-ZM1-235-310		FLY-WHL ASSY, L (DECK 2)
48	82-ZM3-208-410		FLY-WHL ASSY, L2 (DECK 1)
49	82-ZM3-206-010		BELT, R
50	82-ZM1-245-210		HLDR, IC
51	82-ZM3-215-010		HLDR, MC
52	82-ZM3-202-010		PULLEY, MOT 2M
53	82-ZM1-288-010		SH, 1.63-3.2-0.5 SLT
54	80-ZM6-243-010		SH, 1.75-3.6-0.5 SLT
55	80-ZM6-230-010		SH, BELT
56	82-ZM1-308-110		CUSH-G DIA3.7-9-3.2
57	86-575-361-010		CUSH-G, 6-8-0.8
58	82-ZM3-205-010		BELT, L
59	82-ZM3-204-010		PULLEY, COUPLER (DECK 1)
60	87-045-347-010		MOT, SHU2L 70(M1)
61	87-046-355-010		HEAD, PH HADKH25298(PH)
61	87-046-356-010		HEAD, RPH HADKH5581B(RPH)
62	82-ZM1-312-010		CAPSTAN N 2.2-41.7
63	82-ZM1-313-010		CAPSTAN N 2-41.5
A	82-ZM1-315-010		S-SCREW, GVIDE TAPE
B	80-ZM6-207-010		V+1.6-7
C	82-ZM1-309-010		S-SCRW, MOTOR
D	87-067-178-010		VTT+2.6-3
E	82-ZM1-597-019		PW, 2.15-6.8-0.4 SLT
F	87-067-972-010		PW, 1.05-3-0.25 SLT

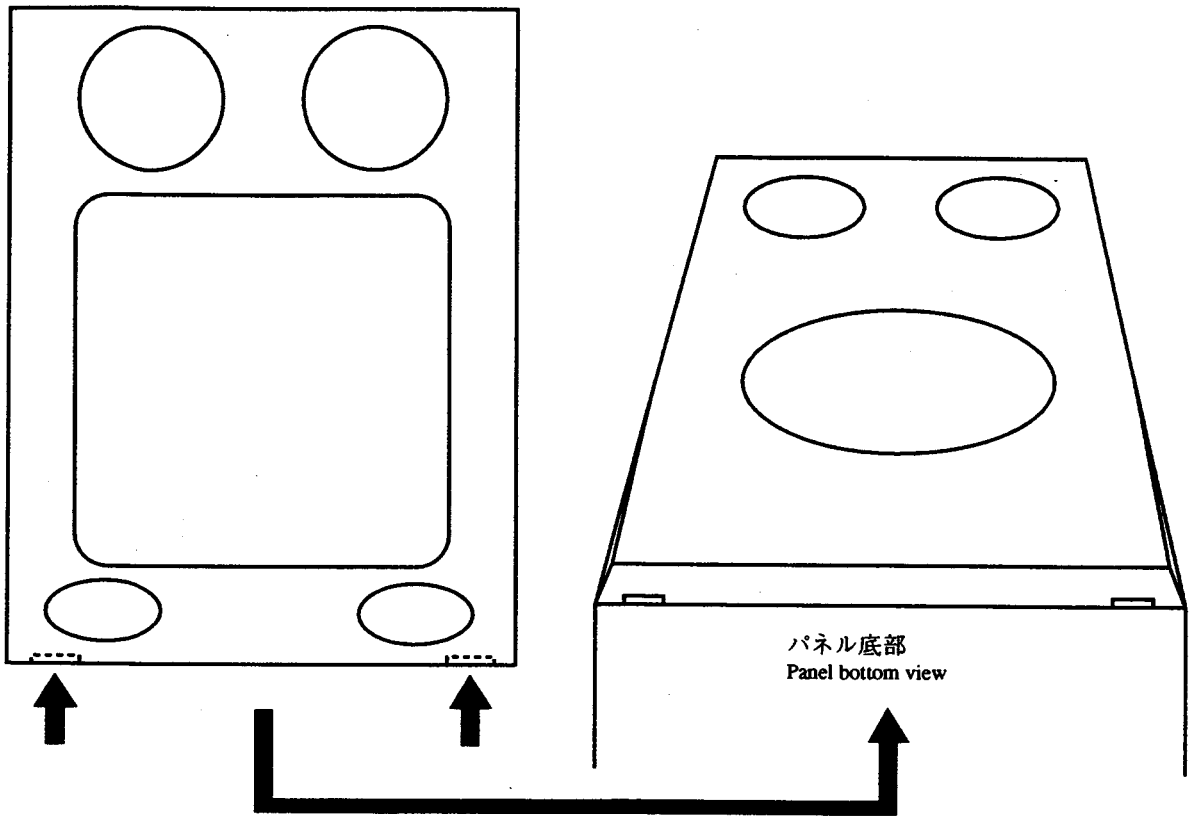
SPRING APPLICATION POSITION





DISASSEMBLY INSTRUCTIONS (HR, G ONLY)

矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。
Insert a flat - bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



■SPEAKER PARTS LIST (HR,G MODELS)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	85-MS1-014-010		GRILL FRAME ASSY
2	85-MS1-016-010		PANEL TM ASSY
3	84-VS3-603-010		SPEAKER TWEETER
4	82-VS3-601-010		SPEAKER WOOFER
5	85-MS1-001-010		PANEL FR,R
6	85-MS1-018-010		PANEL FR,L
7	83-082-041-010		CORD BUSH
8	83-096-614-010		SPEAKER CORD

■SPEAKER LIST (K,EE,EEZ,EZ MODELS)

DESCRIPTIONで判断できない物は "REFERENME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
1	85-MS1-010-010		GRILL FRAME ASSY E
2	85-MS1-013-010		DUCT
3	82-MS1-603-010		SPEAKER TWEETER<K>
3	85-MS1-605-010		SPEAKER TWEETER<EE,EEZ,EZ>
4	85-MS1-601-010		SPEAKER WOOFER<K>
4	85-MS1-603-010		SPEAKER WOOFER<EE,EEZ,EZ>
5	81-NSC-602-010		CERAMIC<K>
5	85-MS1-607-010		CERAMIC<EE,EEZ,EZ>

このスピーカーシステムは分解できません。

This speaker system can not dissolution.

■ ACCESSORIES／PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
1	85-MA1-901-019		IB,ESC(M)<HR,G>
2	85-MA1-902-019		IB,E(ESF)-M<EE,EEZ,K,EZ>
3	85-MA1-903-019		IB,E(EGI)-M<EE,EEZ,EZ>
4	85-NT3-661-019		RC-T506
5	87-006-225-019		AM LOOP ANT NC2
6	87-043-106-019		FM, WIRE ANT (Z)<EE,EEZ,K,EZ>
7	87-043-115-01B		ANT,FEEDER FM<HR,G>
8	87-099-789-019		PLUG,ADPTR IR44<HR>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

アイワ株式会社
AIWA CO.,LTD.

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931261, 750038

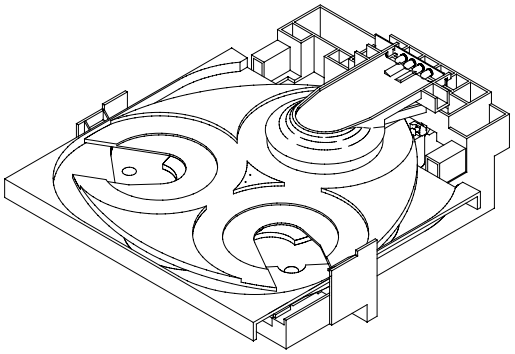
Tokyo Japan

Printed in Singapore

aiwa

aiwa SERVICE

4ZG-1



CD MECHANISM

• BASIC CD MECHANISM:3ZG-2 E1

• TYPE: English

BASIC NAME	DERIVATION NAME					
4ZG-1	V	O	S1	D	SH	

■ This Service Manual has various derivation.Derivation name is indicated by the Service Manual for each model.

SERVICE MANUAL

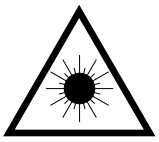
S/M Code No 09-985-249-80T

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

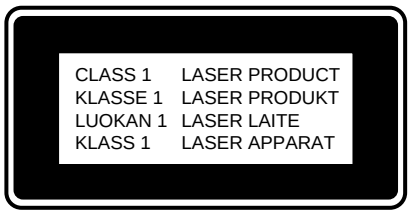
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

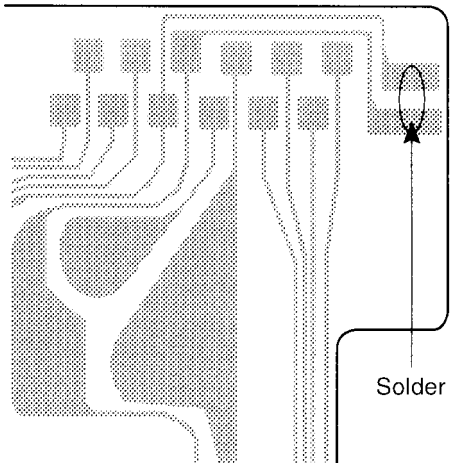


Precaution to replace Optical block (KSS-213F)

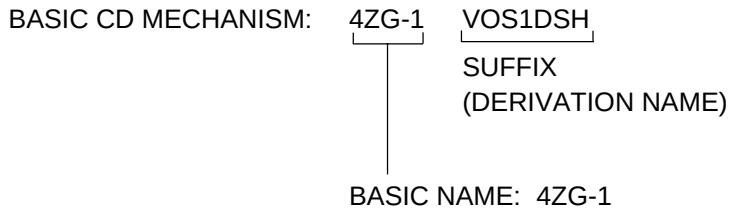
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 4ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.



BASIC NAME	DERIVATION NAME							
4ZG-1	V	O	S1	D	SH	—	—	—

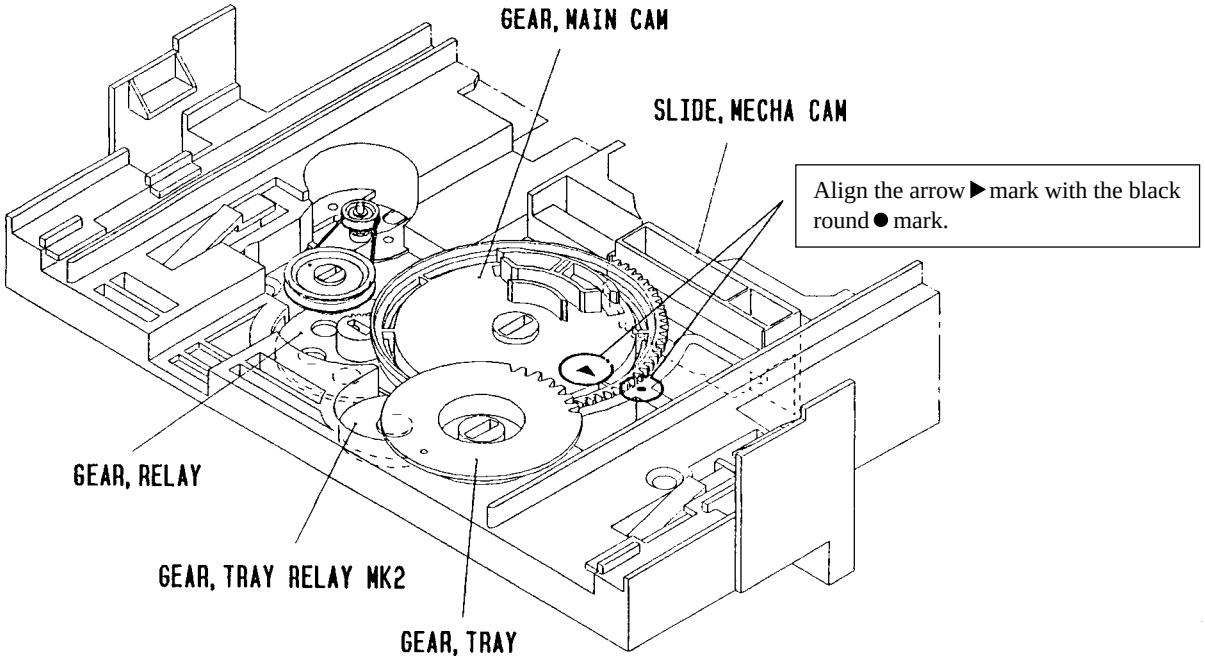
DERIVATION NAME

- V: VIDEO OUT
- O: On screen display
- S1: THE 1st SONY IC MODEL
- D: Digital output function
- SH: Pick up equipped with shutter

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

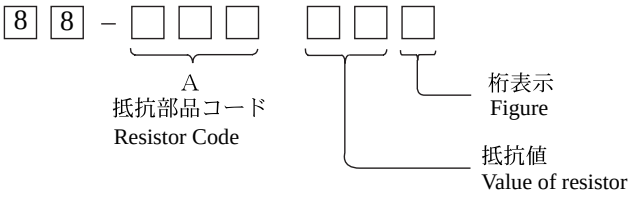
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	84-ZG1-697-010		C-IC,UPD78016FGC-549
	87-017-825-010		IC,GP1F32T
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-873-010		IC,LB1644
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-656-040		C-IC,MB81V4260S-60/70PFTN
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	87-A20-918-040		C-IC,SM5878AM
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	87-A30-117-010		TR,2SA1357
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-580-080		C-TR,DTA123JK
	87-026-470-080		TR,HN1C03F (0.3W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-384-080		C-ZENER,UDZ3.3B
3CD C.B			
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-152-080		C-CAP,S 8P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-112-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-314-080		C-CAP,S 22P-50V
C161	87-010-182-080		C-CAP,S 2200P-50 B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-016-669-080		C-CAP,S 0.1-25 K B
C204	87-010-197-080		CAP, CHIP 0.01 DM
C205	87-010-379-040		CAP,E 22-16 M SME
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-040		CAP,E 100-10
C213	87-010-190-080		S CHIP F 0.01
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-010-112-040		CAP,E 100-16
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-016-044-040		CAP,E 100-16 GAS
C402	87-010-190-080		S CHIP F 0.01
C403	87-010-190-080		S CHIP F 0.01
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-040		CAP,E 100-10
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-040		CAP,E 100-10
C511	87-016-669-080		C-CAP,S 0.1-25 K B
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-040		CAP,E 47-10
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-040		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-016-669-080		C-CAP,S 0.1-25 K B
C540	87-010-078-040		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-040		CAP,E 1-50 GAS
C550	87-010-196-080		CHIP CAPACITOR,0.1-25
C551	87-012-153-080		C-CAP,S 120P-50 CH
C552	87-016-526-080		C-CAP,S 0.47-16 BK
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-378-040		CAP,E 10-16
C557	87-010-316-080		C-CAP,S 33P-50 CH
C558	87-010-315-080		C-CAP,S 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-010-197-080		CAP, CHIP 0.01 DM
C603	87-010-112-040		CAP,E 100-16
C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C605	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-197-080		CAP, CHIP 0.01 DM
C607	87-010-313-080		CAP, CHIP 18P
C608	87-010-313-080		CAP, CHIP 18P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-178-080		CHIP CAP 1000P
C611	87-010-178-080		CHIP CAP 1000P
C612	87-010-178-080		CHIP CAP 1000P
C613	87-010-403-040		CAP,E 3.3-50 SME
C614	87-010-403-040		CAP,E 3.3-50 SME
C615	87-010-318-080		C-CAP,S 47P-50 CH
C616	87-010-318-080		C-CAP,S 47P-50 CH
CN101	87-A60-424-010		CONN,16P V TOC-B
CN102	87-099-199-010		CONN,6P 6216 H
CN401	87-099-212-010		CONN,5P 6216 V
CN403	87-099-030-010		CONN,13P 6216H
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
M401	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080		C-RES,S 82K-1/10W F
R131	87-022-364-080		C-RES,S 82K-1/10W F
R132	87-022-364-080		C-RES,S 82K-1/10W F
R133	87-022-364-080		C-RES,S 82K-1/10W F
R134	87-022-364-080		C-RES,S 82K-1/10W F
R135	87-022-364-080		C-RES,S 82K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	87-A90-162-010		SW,SL 1-1-3 SSSU
S401	87-036-109-010		PUSH SWITCH
S402	87-036-109-010		PUSH SWITCH
W1	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
W2	85-NFT-611-110		FF-CABLE 16P-1.0
W3	84-ZG1-630-010		CABLE FFC 6P-1.25
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ
LED C.B			
LED401	87-070-200-080		LED,SLP636C-81-S-T1
LED402	87-017-350-080		LED,SEL1550CM
LED403	87-017-350-080		LED,SEL1550CM
LED404	87-070-200-080		LED,SLP636C-81-S-T1
T-T C.B			
C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
PS401	87-026-573-010		IC,GP1S53V
DRIVE C.B			
CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO
CD MOTOR C.B			
CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

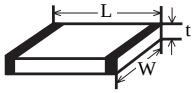
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

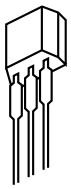
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



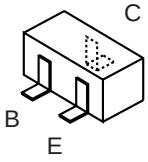
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード　: A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

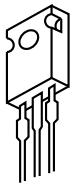
TRANSISTOR ILLUSTRATION



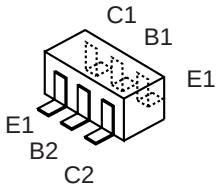
2SA933S



2SA1162
2SC2712
DTA123JK
DTA124XK
DTC124XK

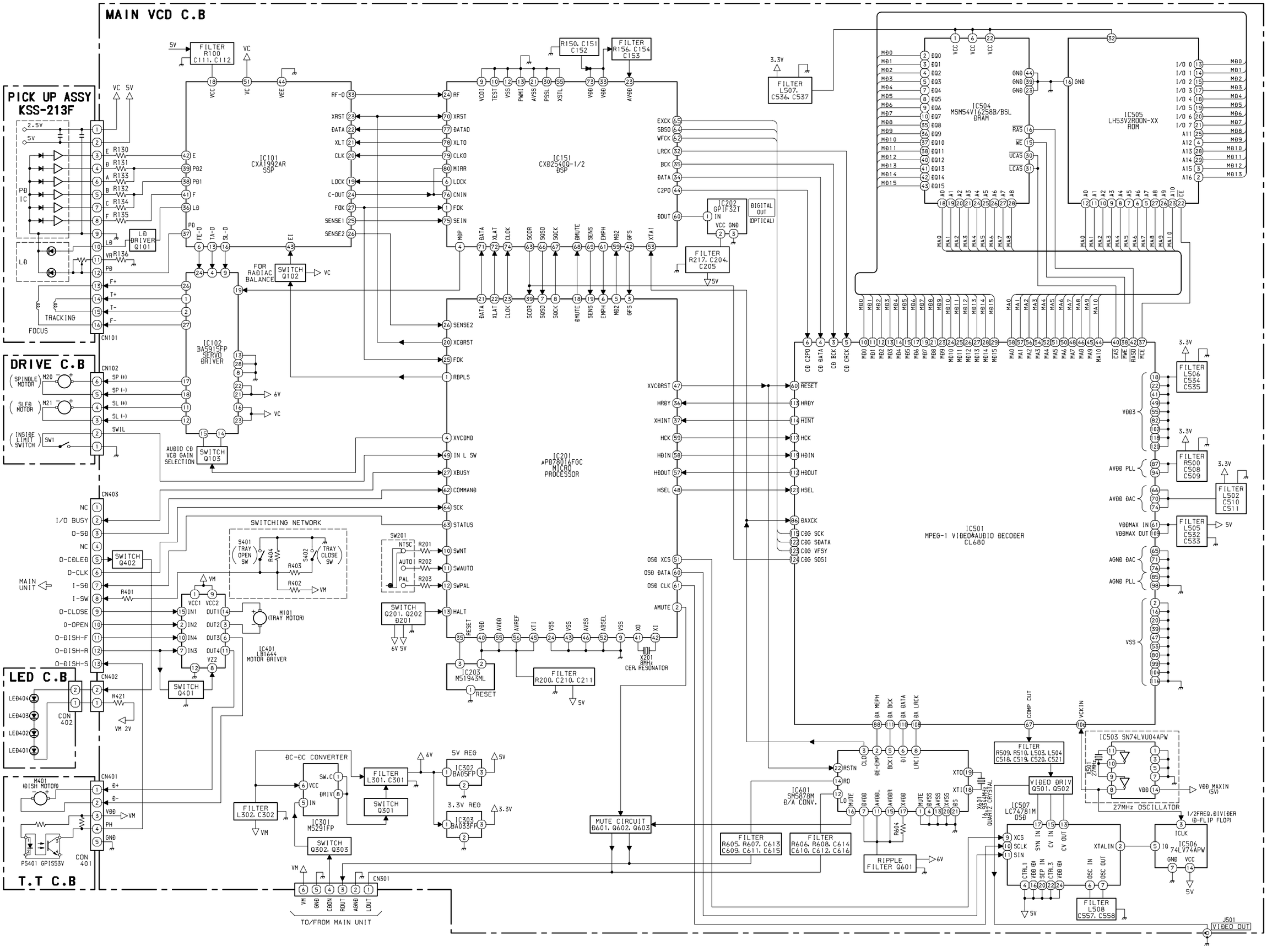


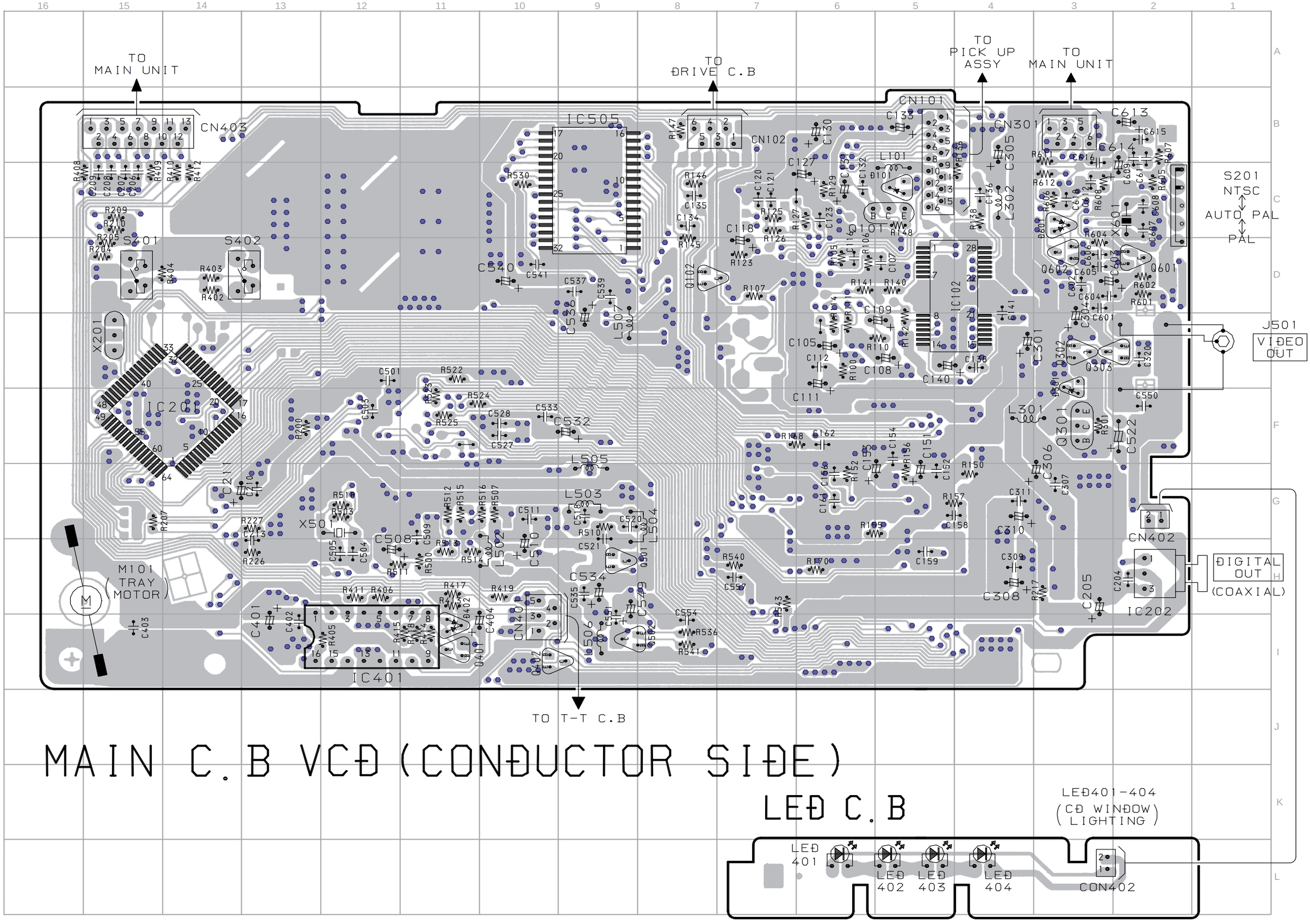
2SA1357

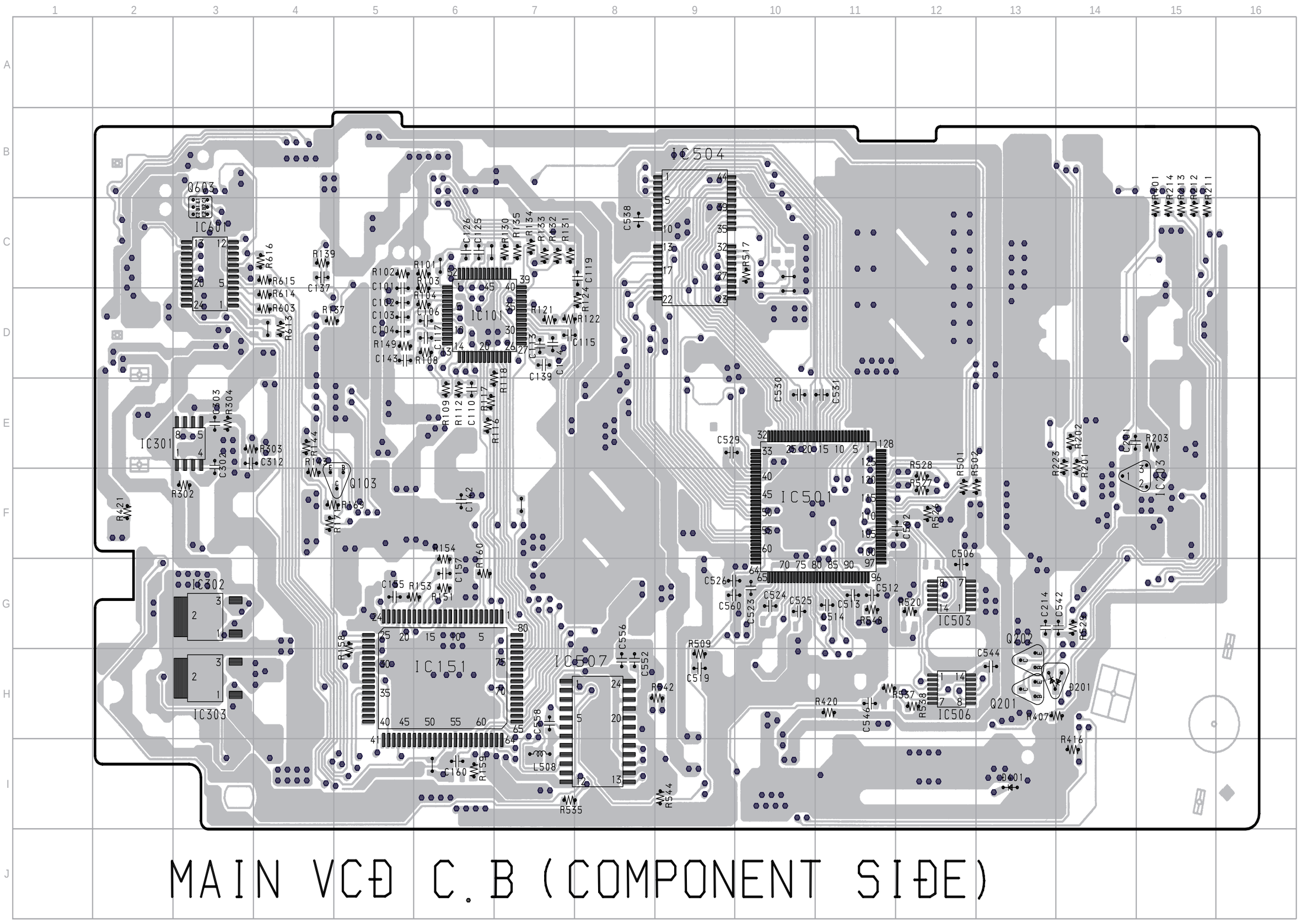


HN1C03F

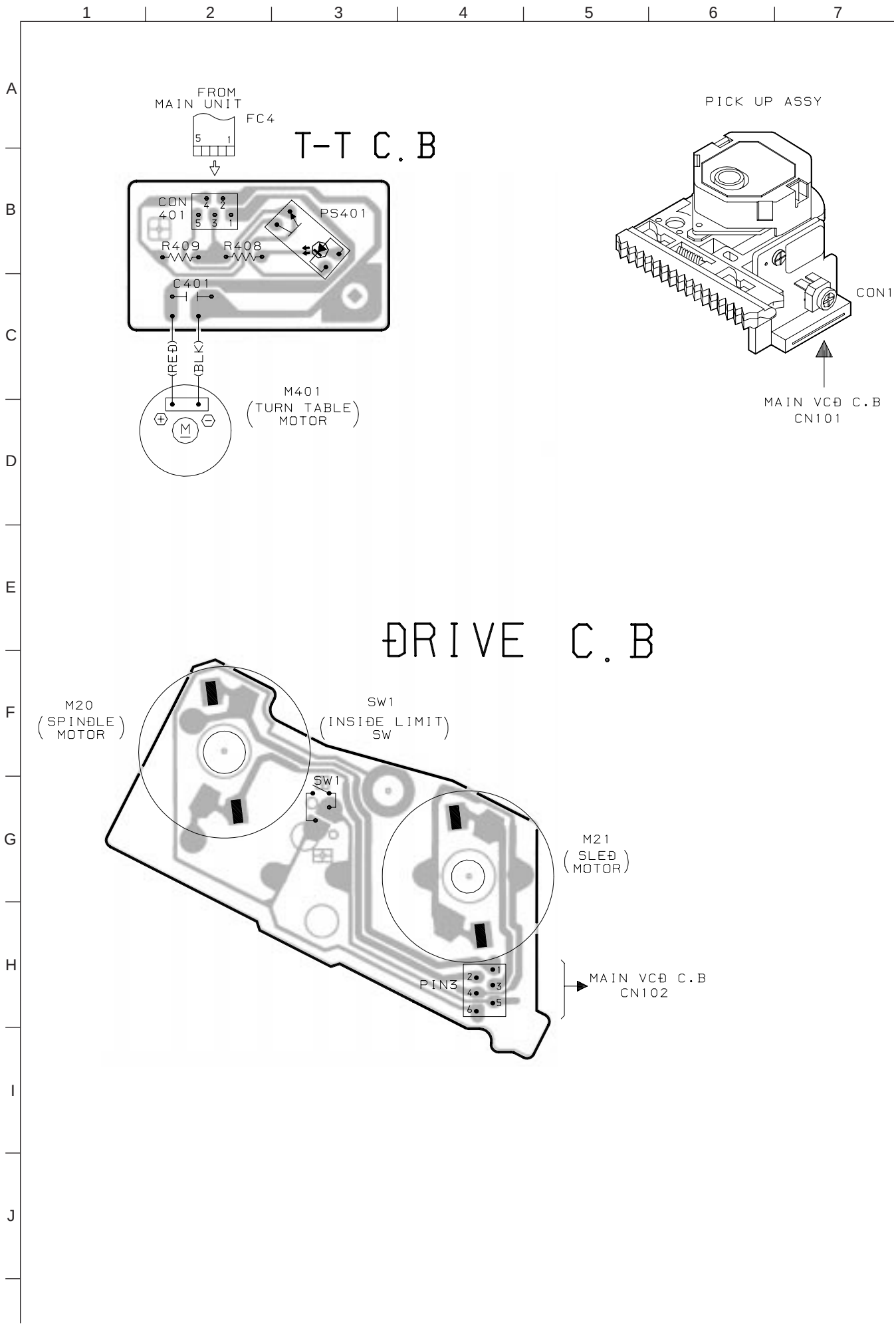
BLOCK DIAGRAM



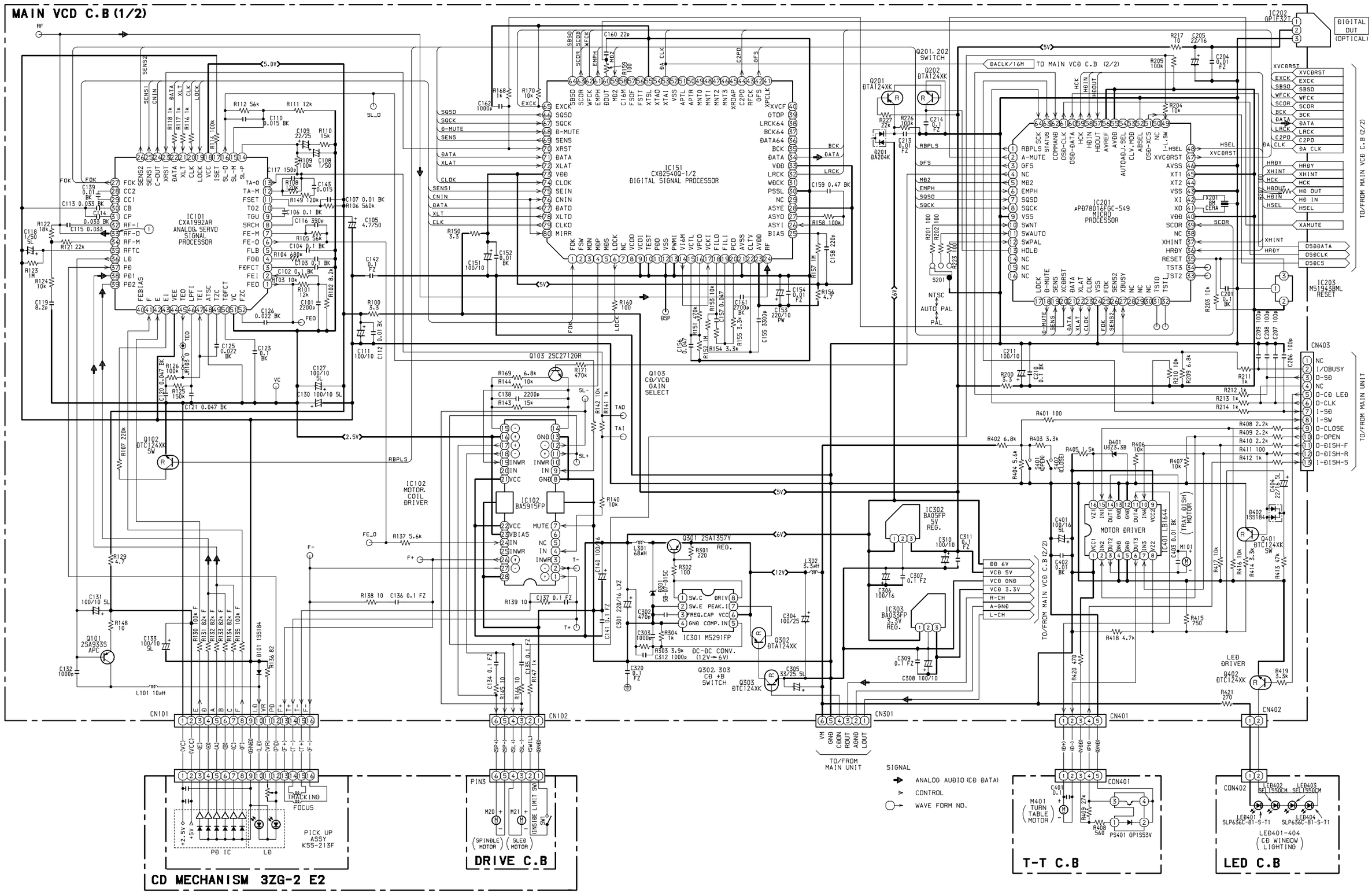

TO MAIN UNIT
TO ÐRIVE C.B
TO PICK UP ASSY
TO MAIN UNIT
CN403
CN102
CN101
CN301
CN402
IC505
IC201
IC401
IC202
IC102
S401
S402
S201 NTSC AUTO PAL PAL
J501 VIÐEO OUT
ÐIGITAL OUT (COAXIAL)
M101 (TRAY MOTOR)
TO T-T C.B
MAIN C.B VCÐ (CONÐUCTOR SIÐE)
LEÐ C.B
LEÐ401-404 (CÐ WINÐOW LIGHTING)
LEÐ 401
LEÐ 402
LEÐ 403
LEÐ 404
CON402

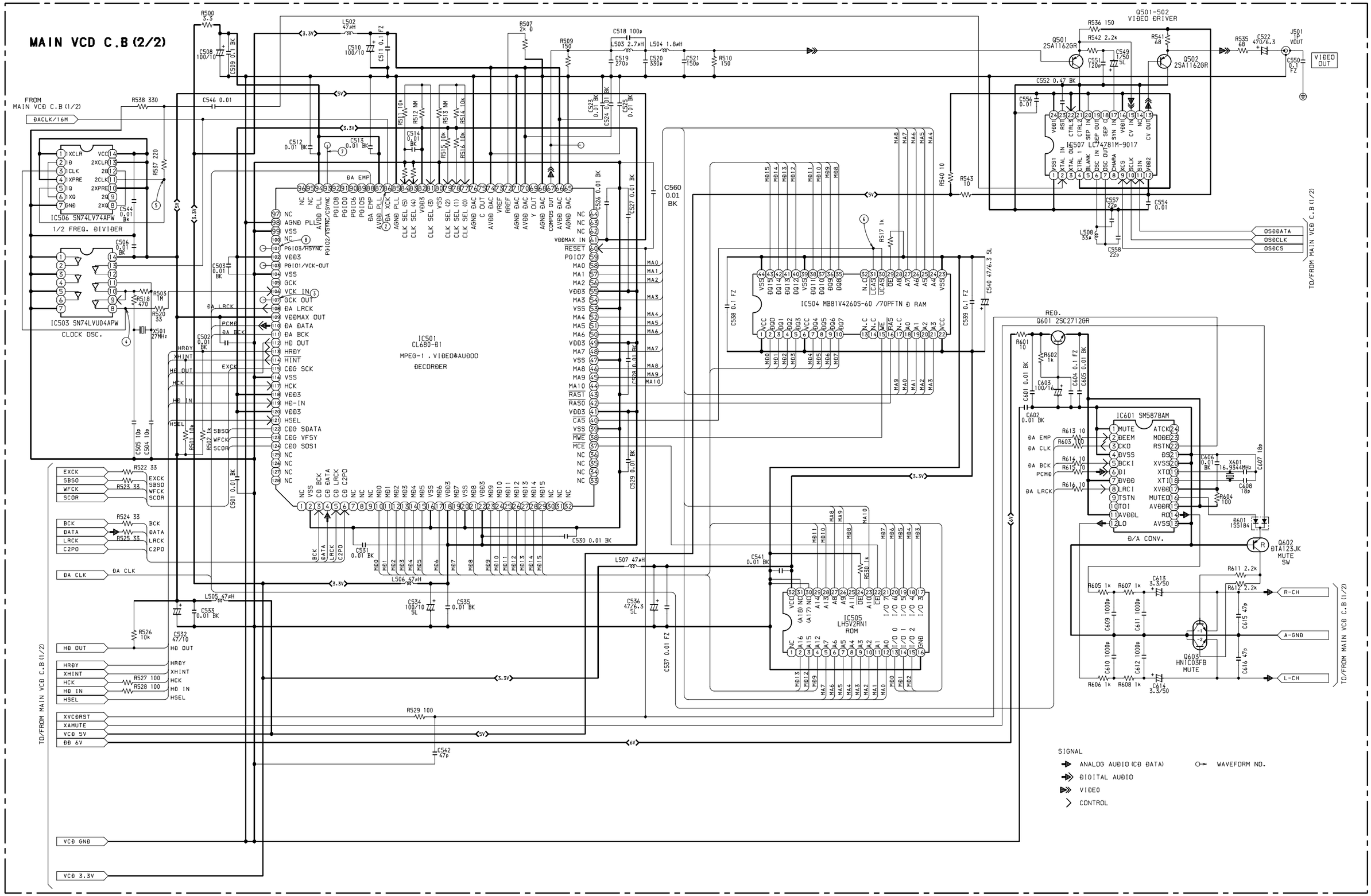


MAIN VCÐ C.B (COMPONENT SIÐE)


FROM
MAIN UNIT
FC4
5
1
T-T C.B
CON
401
4
2
5
3
1
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE
MOTOR)
M
PICK UP ASSY
CON1
MAIN VCD C.B
CN101
DRIVE C.B
M20
(SPINDLE
MOTOR)
SW1
(INSIDE LIMIT
SW)
SW1
M21
(SLED
MOTOR)
PIN3
1
2
3
4
5
6
MAIN VCD C.B
CN102

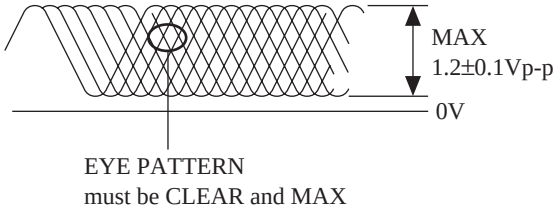
SCHEMATIC DIAGRAM-1




MAIN VCD C.B (2/2)
FROM MAIN VCD C.B (1/2)
ÐACLK/16M
IC506 SN74LV74APW
1/2 FREQ. ÐIVIÐER
IC503 SN74LVU04APW
CLOCK OSC.
X501 27MHz
IC501 CL680-Ð1
MPEG-1 . VIÐEO&AUÐIO ÐECORÐER
IC504 MB81V4260S-60 /70PFTN Ð RAM
IC505 LH5V2RN1 ROM
IC507 LC74781M-9017
Q501-502 VIÐEO ÐRIVER
Q501 2SA1162GR
Q502 2SA1162GR
REG. Q601 2SC2712GR
IC601 SM5878AM
Ð/A CONV.
Q602 ÐTA123JK MUTE SW
Q603 HN1C03FB MUTE
D601 1SS184
VIÐEO OUT
TO/FROM MAIN VCÐ C.B (1/2)
TO/FROM MAIN VCÐ C.B (1/2)
OSÐÐATA
OSÐCLK
OSÐCS
R-CH
A-GNÐ
L-CH
SIGNAL
ANALOG AUÐIO (CÐ ÐATA)
ÐIGITAL AUÐIO
VIÐEO
CONTROL
WAVEFORM NO.

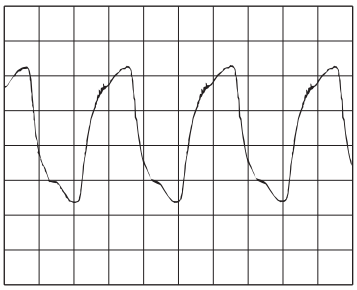
WAVE FORM

① IC101 Pin ㉝ (RF-O)
VOLT/DIV: 200mV
TIME/DIV: 0.5µS

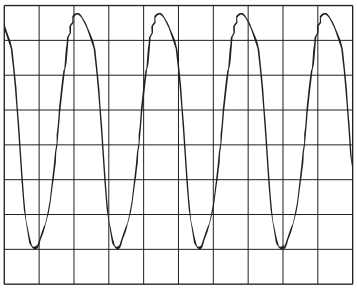


EYE PATTERN
must be CLEAR and MAX

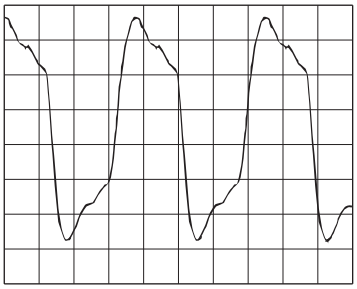
② IC501 Pin ㊽ DA XCK
16.93MHz
VOLT/DIV: 1V
TIME/DIV: 20nS



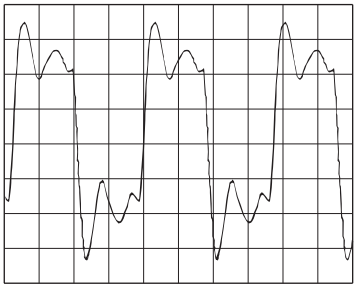
③ IC501 Pin ⑩⑦ GCK OUT
42.3MHz
VOLT/DIV: 1V
TIME/DIV: 10nS



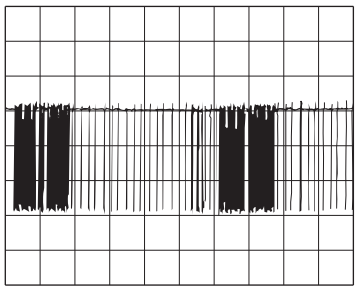
④ IC503 Pin ⑧ 33 VCK
27MHz±1.35kHz
VOLT/DIV: 1V
TIME/DIV: 10nS



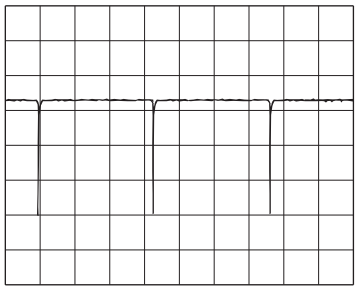
⑤ IC506 Pin ⑪ OSD CLK
13.5MHz±675Hz
VOLT/DIV: 1V
TIME/DIV: 20nS



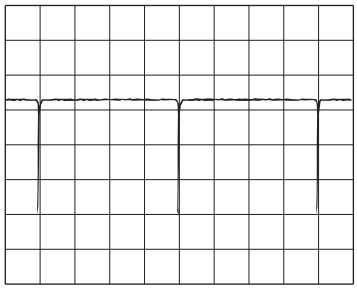
⑥ IC504 Pin ㉚ $\overline{\text{UCAS}}$
(Pin ㉛ $\overline{\text{LCAS}}$)
VOLT/DIV: 1V
TIME/DIV: 2µS



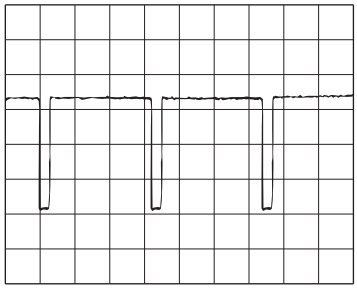
⑦ IC501 Pin ㉝ $\overline{\text{VSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 5mS



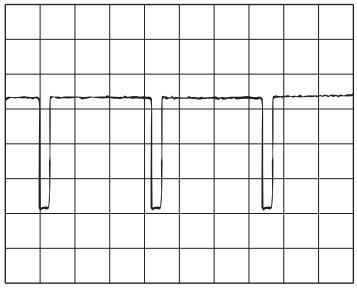
⑧ IC501 Pin ㉝ $\overline{\text{VSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 5mS



⑧ IC501 Pin ⑩① $\overline{\text{HSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 20µS



IC501 Pin ⑩① $\overline{\text{HSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 20µS



IC DESCRIPTION

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC		
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS		GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS		Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD		Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC		
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD		Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS		GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O.
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$	O	$\overline{\text{VSYNC}}/\overline{\text{CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock.
97	AUD_XCK	O	Audio XCK.
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG DATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output.
126-128	NC	—	No connection.

IC, LC74781M

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{RST}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{RST}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{CS}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016FGC

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	I	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L*3sec=STOP).
14	NC	—	Nou used.
15	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
16	NC	—	Nou used.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	NC	—	Nou used.
29	NC	—	
30	NC	—	
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	HINT FROM CL680.
38	NC	—	Nou used.
39	SCOR	I	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

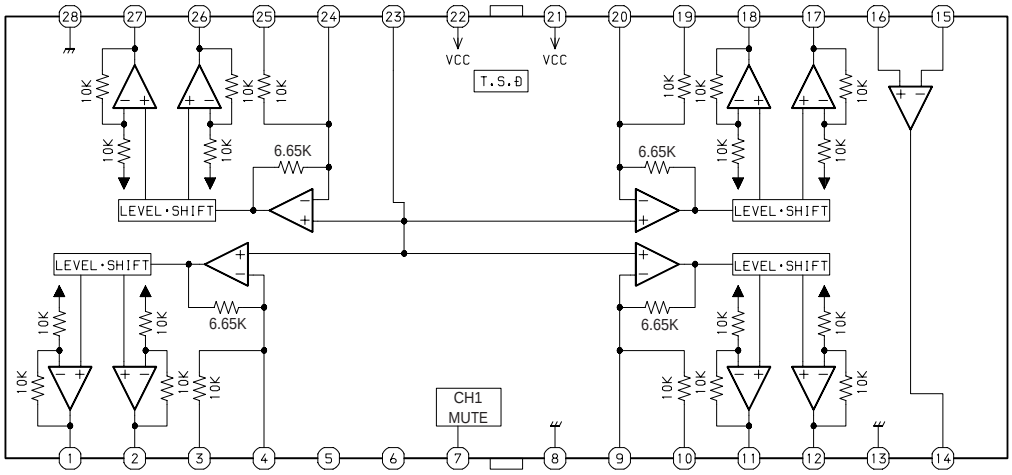
Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Nou used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW.
50	NC	—	Nou used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN TO CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

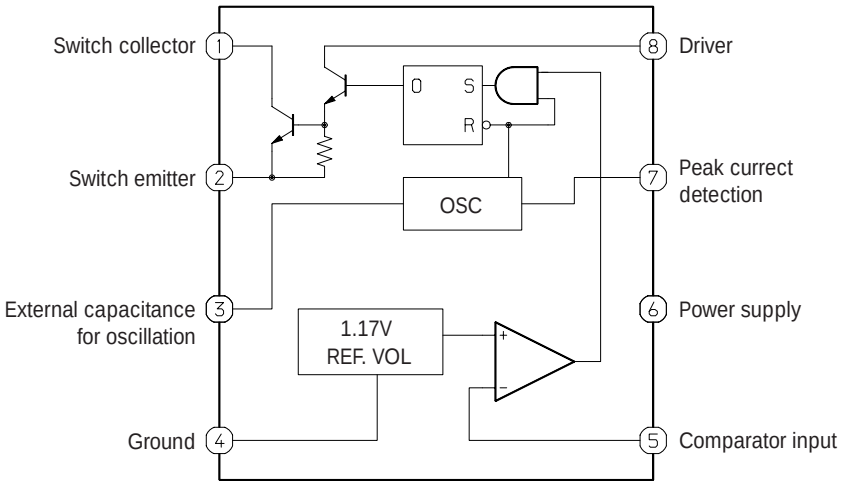
IC BLOCK DIAGRAM

IC, BA5915FP

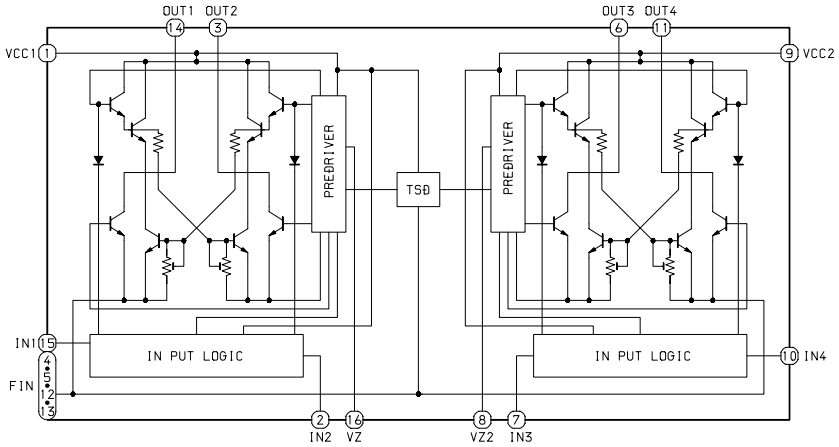


T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, M5291FP



IC, LB1644



TRUH TABLE

IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
0	0	L	L	0	0	L	L
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

INPUT			OUTPUT				MODE	
IN1	IN2.3	IN4	OUT1	OUT2	OUT3	OUT4	M1	M2
0	0	0	L	L	L	L	BRAKE	BRAKE
1	0	0	H	L	L	L	FF/REW	BRAKE
0	1	1	L	H	L	L	REW/FF	BRAKE
1	1	0	L	L	H	L	BRAKE	FF/REW
0	0	1	L	L	L	H	BRAKE	REW/FF
1	1	1	L	L	L	L	BRAKE	BRAKE

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

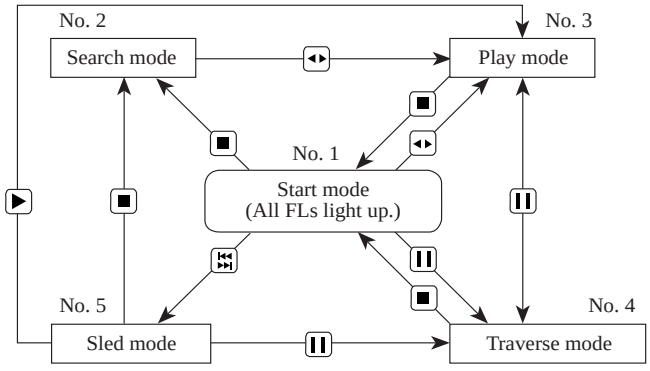
2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	TEST□□ □□ □□ Flashes repeatdly	• Test mode is activated. • CD block power is ON.	• Test mode
Search mode No.2	■ key		• Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check FOK/FZC
Traverse mode No.4	⏸ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

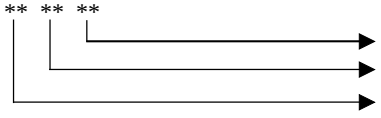
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ⏸ status is active. If they are pressed, playback will not be possible after the ⏸ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ⏸ status, press the ■ key and return to the start mode (No.1).
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



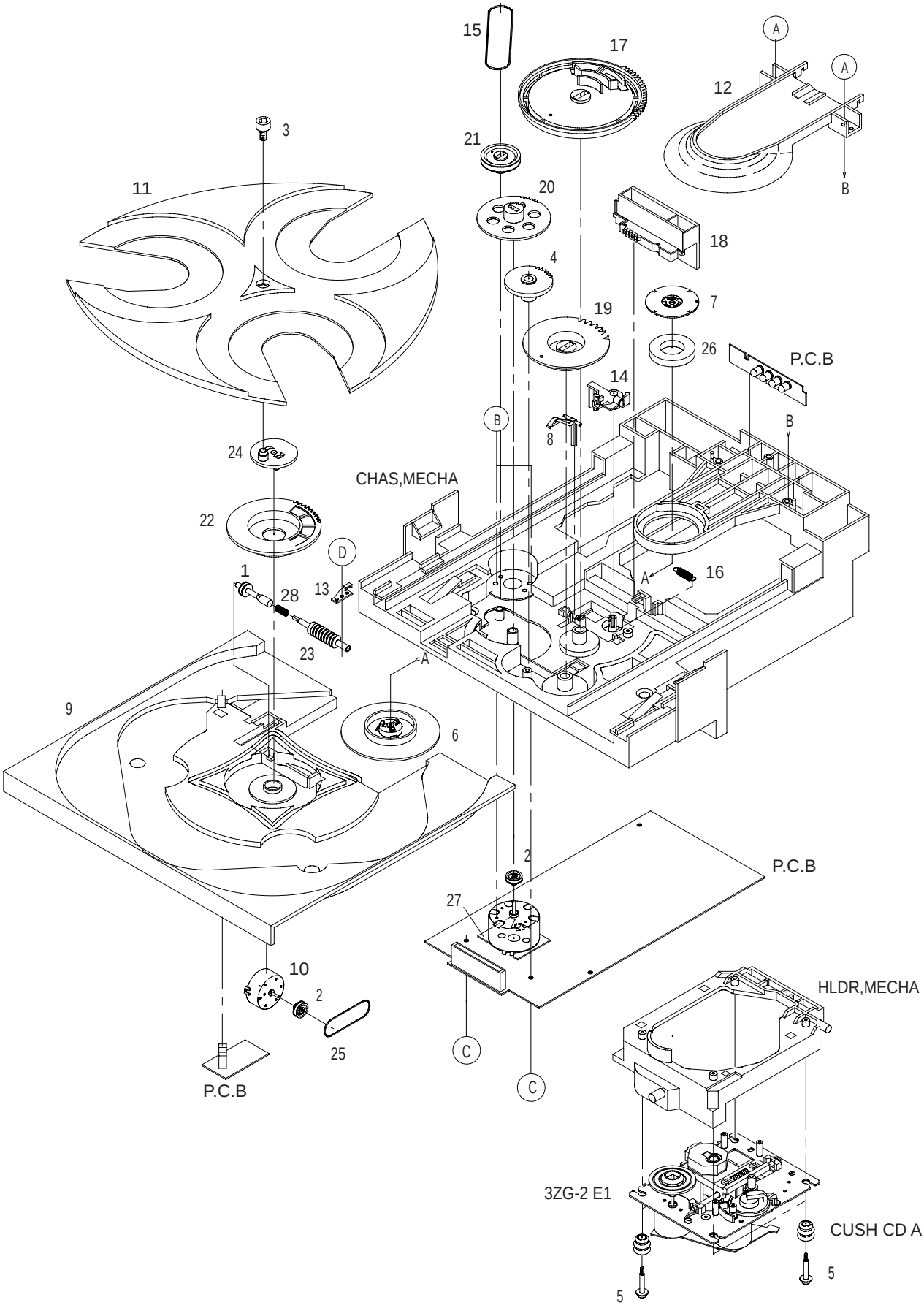
   If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

5. How to check the Automatic Adjustment Values
   The automatic adjustment values can be checked by pressing the square (■) button.
   FL display (displayed in hexadecimal values)



Note) The reference value is “20 08 08”.

MECHANICAL EXPLODED VIEW 1/1

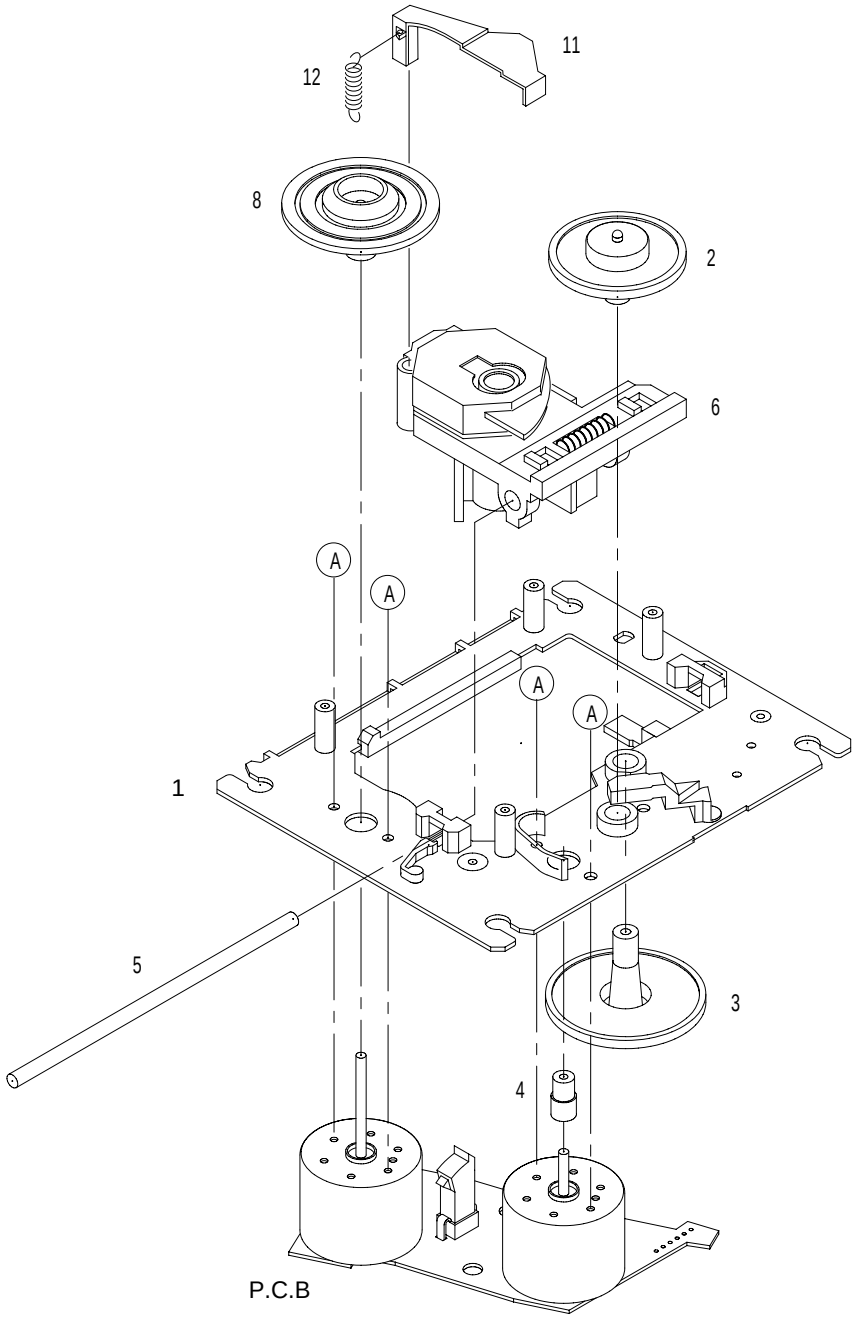


MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	81-ZG1-277-310		HLDR,MAGNET N
7	81-ZG1-255-110		PLATE,MAGNET MK2
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD
13	84-ZG1-259-010		SPR-P,WORM
14	84-ZG1-208-210		LEVER,CAM
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-215-410		GEAR,MAIN CAM BLU
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL
19	84-ZG1-205-110		GEAR,TRAY
20	84-ZG1-206-110		GEAR,RELAY
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	83-ZG3-602-010		RING,MAG
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-248-010		SPR-C,WORM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-251-070-410		U+2.6-3
C	87-342-036-210		UT2+2-8
D	87-067-981-010		BVT2+3-6 BLK

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

CX-NAK572
CX-NK270
CX-NK290
CX-NK370
CX-NK570
CX-NK765
CX-NK770
CX-NK970
DX-SNKH100

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

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